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CANCER OF THE RECTUM

G. V. BRINDLEY, M. D., F. A. C. S.
Temple, Texas

(Read at the Forty-sixth Annual Meeting of the New Mexico Medical Society, Albuquerque, New Mexico, May 10 to 12, 1928.)

The frequency of cancer of the rectum, the curability of the early lesions, the hopelessness of advanced disease, and the high mortality, are factors justifying consideration of this subject. One patient out of every 545 admitted for general examination has a cancer of the rectum. Carcinoma of the large bowel has a predilection to three of its separate segments. The rectum is the part most frequently involved; the sigmoid is next and the cecum, with the adjacent ascending colon, comes third. Ninety per cent of all the cancers of the large bowel are in these three parts with approximately sixty per cent or more in the rectum. Early malignancy here, as elsewhere in the body, is a local lesion and is amenable to surgical removal, with a good prospect of permanent cure. Distant metastasis is a late occurrence in a majority of the cases. This statement is substantiated by the fact that, in performing palliative colostomies for advanced inoperable cancer, fifty per cent had no demonstrable disease outside the pelvis. Contrasting with this fact, approximately fifty per cent of rectal cancers are inoperable when they come for treatment. The average duration of symptoms for the patients with an operable lesion was eight and one-half months; only two cases with a history of symptoms of more than a year's duration were thought to be operable. Both these patients were found to have a cancer of grade two malignancy. Jones of Boston states that only eleven and three-tenths per cent of all cancers seen are alive at the end of five years. Due study and consideration of this subject by the medical profession should lead to an earlier diagnosis in many cases, with a resulting higher percentage of permanent cures.

A brief consideration of the pathology should aid in the further study of this subject. A majority of the cancers of the large bowel are adeno-carcinomata. They may form either very cellular, fungoid growths which ulcerate readily and bleed frequently, or the more fibrous growths which are not so prone to ulceration and bleeding, but which do have a tendency to produce a narrowing of the lumen of the bowel. The cellular type predominates in the right colon and the rectum, while the fibrous type is the growth most frequently seen in the descending colon and the sigmoid. Squamous cell epithelioma is found occasionally, but it usually involves the anus. There is a definite narrowing of the intestinal tube in the region of the recto-sigmoid and the anal canal. Types of malignancy which have a tendency to produce a narrowing of the bowel lumen, are frequently seen to involve these segments. Due to these facts, growths of the recto-sigmoid and anal canal may give rise to symptoms indicating a narrowing and a blocking of the bowel more often, and usually earlier, than will lesions elsewhere in the rectum.

The case records of seventy patients with cancer of the rectum have been reviewed for this paper — pathological reports on twenty-seven of these were available for study. Adeno-carcinoma was found to be present in twenty-five, squamous cell epithelioma in two. Our observation leads us to believe that the malignancy materially influences the rapidity of growth, the time of and number of cases with metastasis, the frequency of recurrence, the longevity after operation, and the number of permanent cures. This grading is determined by the degree of cell differentiation as advocated by Broders. Two of the twenty-five adeno-carcinomata were grade one, eleven were grade two, nine were grade three, and one was grade four; two were not graded, due to the degenerated condition of the tissue obtained for study. The two squamous cell epitheliomata were both grade three. It is seen from this grading that approximately half of the cancers of the rectum are

grade one or two in the degree of malignancy and are therefore favorable lesions for treatment.

Special attention has been given to an analysis of the first symptoms. I would particularly emphasize the importance of this for it matters little what the symptoms of advanced disease may be. The symptoms of an early cancer of the rectum were found to be few and of a mild, indefinite nature. They are never of an acute, violent degree. Such is true of an early malignancy anywhere. The symptoms of early diseases are often referable to some change in the frequency and character of stool. A fact worthy of note is that the symptoms tend to be of a constant, persistent, progressive nature. There is no long period of freedom from symptoms. Most of these patients are ambulatory; many have been doing their daily work. A detailed history accurately noting the first manifestations of disease, is quite important. Then caution should be exercised to the end that these first symptoms may not be regarded as too insignificant and common-place for consideration. A suspecting mind and a familiarity with the symptoms of early disease should prevent this error.

The most frequent symptom first to attract the attention of the patient, is blood in the stool. Forty-eight of the seventy patients gave the history of the early presence of blood. Thirteen additional records stated the late presence of blood. Furthermore, "blood in the stool" was given most often as the chief complaint of the patient at the time of admission. The source of blood is frequently mistaken by the patient. He usually thinks that the bleeding is due to hemorrhoids; occasionally women will believe that it is of uterine origin. Hemorrhoids are often an associated lesion. Too frequently doctors attribute the bleeding to them. Thirty-two cases gave a history of the presence of hemorrhoids and eleven had recently been subjected to a hemorrhoidectomy. Cancer of the rectum should be excluded from the diagnosis whenever the patient complains of hemorrhoids, and before ever making the diagnosis of hemorrhoids.

The presence of mucus in the stool is of frequent occurrence, probably present more often than is mentioned. Forty-two patients mentioned the presence of mucus, thirty-two giving it as an early manifestation.

Pain is next to blood in the frequency of occurrence. Sixty of the seventy patients made some complaint of pain. However, only twenty-eight gave pain as among the first symptoms, and in only two of these was the pain more than a mild degree. The patient usually expresses this mild pain as an uneasiness, a weighty feeling, a heaviness, a soreness, or a little cramping. It frequently is more noticeable shortly before stool and may be somewhat relieved by it. I would emphasize the fact that intense pain is never a symptom of early cancer of the rectum. This is true of malignancy in its incipiency anywhere. As the disease progresses, the degree of pain often is intensified; however, only twelve patients out of the seventy at the time of admission complained of relatively intense pain, and ten of these twelve had advanced disease.

Thirty-nine patients gave a history of constipation; twenty-three gave this complaint as among the first symptoms. Some of these unquestionably were constipated before the beginning of the cancer. Obstruction occasionally occurs in sigmoid cancer without marked preceding symptoms, but complete obstruction is rare even in advanced malignancy of the rectum.

Diarrhea was a symptom given by thirty-two of the patients. It was recorded as an early condition in sixteen case records. Sometimes the diarrhea is due to medication. Quite frequently the history would state that laxatives, as mineral oil, were being taken, the objective being to keep the stools soft, for this seemed to lessen the degree of pain and prevent bleeding.

Rectal cancer produces few gastric symptoms, and these are to be found in patients with advanced disease. Only twenty-two out of the seventy even complained of loss of appetite. Weight-loss is never a symptom of early disease. Slight weight-loss was present late in twenty-six cases and a rather marked weight-loss was a late occurrence of fourteen patients.

A routine, systematic examination of all patients is of much value. By such a procedure, occasionally an early cancer of the rectum will be found before the symptoms will justify even a suspicion of such a condition. All cancers of the rectum can be diagnosed by a complete physical examination, in conjunction with proctoscopic inspection. I believe that any patient who is sick enough to consult a physician because of a major complaint, has not been examined properly unless a digital examination of the rectum has been made. And every patient with the history of abnormal discharge or change in the frequency, character or amount of stool is entitled to a proctoscopic inspection. The x-ray should not be relied upon for the diagnosis, as it will frequently fail to show the early small lesion, which usually produces but little, if any, deformity. The x-ray may be of some value in showing the extent

of disease, particularly in lesions which involve the recto-sigmoid.

The treatment of cancer of the rectum can be considered from the standpoint of curability and palliation. A radical excision is the only thing that gives much prospect of a permanent cure. Coffey states that the only hope for cure is radical surgery. Radium therapy is considered of only palliative value. Nine patients were treated by radium. There was, in some of these cases, an apparent alleviation of symptoms, with a probable prolongation of life. No patient was cured by radiation therapy.

Not all cancers of the rectum are adaptable to the same operative procedure. The location, the stage of the growth, the mobility, the probability of metastasis, the resistance and age of the patient should all be considered. The surgeon should be familiar with the various types of operation and the methods of approach, and should choose the one best suited for the individual case. A plan of operative procedure that has been adapted for a majority of the operable cases when the lesion is below the recto-sigmoid, is after this manner: An exploration of the abdomen is done with the establishment of a colostomy. Some ten or twelve days later, a radical posterior cautery excision is performed. This procedure should not be confused with a local baking, or even a local cautery excision of the cancerous tumor. Rarely will a cure be obtained by such a restricted operation. Several patients have been seen with a recurrence following such a local cauterization. By a radical cautery excision, there are removed the anus, the sphincters, the major portion of the levator ani muscles, the pelvic fascia reflected on to them, the ischiorectal and the pararectal fat and glands, together with the malignant rectum. Where necessary, the peritoneum can be opened readily with the removal of the meso-rectum and terminal sigmoid. The details of this operative procedure were published in the "Southern Medical Journal" in March, 1927. The further use of this method seems to justify the conclusions presented in that paper. May we briefly mention them:

(1) By the use of the cautery, a radical excision of the malignant rectum can be performed with ease and dispatch.

(2) There is less bleeding.

(3) The field of operation is better visualized.

(4) A more extensive growth can be removed.

(5) Shock is less frequent and less pronounced.

(6) The operative mortality is lowered.

(7) The probability of recurrence is definitely diminished.

(8) The percentage of permanent cures will be materially increased.

Twelve cases have been operated by this method without a fatality. A majority of the cases had no appreciable degree of shock. In selected cases of low ano-rectal growths, a perineal or vaginal one-stage cautery excision may be performed. Only two cases were operated by this method.

Early cancers located in the recto-sigmoid region sometimes may be removed advantageously entirely through an abdominal approach. The sigmoid and upper rectum are mobilized; the malignant bowel is widely resected; the rectal stump is closed and a permanent colostomy is made. For the more advanced lesions of this part of the bowel, a combined abdomino-sacral technic is used, the second stage of the operation being performed with the cautery.

Colostomy, radium, and x-ray are the chief agencies of palliation. Patients with inoperable disease are given radium, particularly for the treatment of the cancerous mass, and x-ray to retard gland metastasis. sometimes these two agencies do much in a palliative way. One patient treated by a colostomy, radium and x-ray, lived a little more than three and one-half years; another, treated by colostomy and x-ray, lived a little more than five years. X-ray therapy is also advocated as a supplement to surgery.

DISCUSSION

Dr. Sanford Withers, Denver, Colo. (opening):—I want to emphasize some of the things Dr. Brindley said: Be suspicious of and expect a cancer of the rectum every time a patient complains of passing blood. I think that a colostomy is the most essential part of treatment of cancer of the rectum, and believe it will help to determine whether the growth is operable or inoperable. Do a colostomy, and then wait two or three weeks, giving x-ray treatment in the meantime. Then a careful examination will disclose whether or not there are glands in the cecum. Frequently, glands in the cecum and peripheral fossa completely disappear in three weeks after a colostomy and the growth usually shrinks to one-third in that length of time.

Several years ago I made a report of fifty-eight cases of incurable cancer treated by x-ray and radium. Forty-two are more than two years old now, and, of these, fourteen are well without recurrence of malignancy. I believe that the degree of malignancy must be studied very carefully. We are coming to study it more carefully in all cases of cancer, but it ought to be particularly studied in rectal cancer. About fifty per cent of these cases fall into grades one and two—that is the operable type, if they are not gone too far. But in cases of grades three and four—most of them die. If the malignancy is of grade three or four it is more susceptible to radiation methods. I would rather treat a case of cancer of the breast with radiation. If you can anticipate about what the degree of malignancy is, you can keep yourself out of trouble by not attempting to operate grade three and four cases, but turn these over to some one who does radium and x-ray.

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Dr. Crum Epler, Pueblo, Colo.: I enjoyed Dr. Brindley's paper very much. It is well said, as we all know, that cancer in the beginning is not cancer. It sneaks upon a patient and at the time it is first observed, it will be late enough to cure it. If it can be permanently cured, it must be operated at that time of first discovery because I believe, personally, with all due respect to Dr. Withers, that the only treatment for cancer is the knife. When the patient has procrastinated so long as to be inoperable, (it is a matter of judgment on the part of the surgeon as to whether it is operable or not), it is better to refer that case to a competent radiologist (I mean one who uses radium intelligently), than it is to attempt to operate it.

There is one thing I wish to impress upon all of you, and that is the importance of a thorough examination of all people who come to the physician, ill. It is not sufficient to get the history. As Dr. Brindley said, do not be satisfied that there is nothing the matter with the rectum, when the patient is passing a little blood with colicky stools—then, more than ever, a thorough examination is highly essential. These malignancies of the large bowel, of whatever grade, are slow in progress; they are slow up to a certain point and when the patient finds out that something is wrong, that is just about as long as that patient can go without curettement.

Dr. G. V. Brindley, (closing): I think that Dr. Withers perhaps misunderstood me. I am a great believer in radio therapy and I hope that x-ray and radium will cure radical cancer. I believe it cures it permanently in a very few cases; but two years, of course, is an absolutely insufficient length of time to say "cure." I believe we all realize that, because, in the majority of these cases, the disease is relatively slow. One patient I had, lived more than five years. You can see this same thing with uterine cancer. You can take more than half of the uterine cancers that are inoperable and treat them with radium and, if you examine them six or eight months later, they are practically well, but the majority of them are going to have a recurrence a little later, so I think the ultimate "cures" from radiation will be very few. I do believe, however that any patient with a rectal cancer that is inoperable, is entitled to any palliative treatment, and, when operable, is entitled to operation.

Fig. 1. Carcinoma of rectum excised with the cautery. Note how accessible such a growth is to palpation and proctoscopic visualization.

Fig. 2. Carcinoma of upper rectum. Readily diagnosed by digital examination and proctoscopic inspection.

Diagnostic Tables

Table I.

CHIEF COMPLAINTS ON ADMISSION:

Blood and Mucus in Stool.
Hemorrhage from Rectum.
Diarrhea.
Growth in Rectum.
Colitis—Growth in Colon.
Hemorrhoids and Heaviness in Pelvis.
Pain in Rectum.
Sore on Anal Margin.
Rectal and Prostate Trouble.
Female and Rectal Trouble.
Painful Defecation Following Hemorrhoidectomy.
No Control of Bowel.

Table II.

EARLIER DIAGNOSES:

Hemorrhoids.
Ulcer of the Rectum.
Mucus Colitis.
Amoebia Dysentery.
Diarrhea.
Stricture of the Rectum.
Pruritis Ani.
Colonic Stasis.
Appendicitis.
Tubo-ovarian Disease.
Prostate Hypertrophy.

Table III.

ANALYSIS OF EARLY SYMPTOMS IN 70 CASES:

Blood in Stools	48
Mucus in Stools	32
Mild Pain	26
Severe Pain	2
Constipation	23
Diarrhea	16
Appetite Poor	6
Slight Weight Loss	0

Table IV.

ANALYSIS OF 70 CASES RELATIVE TO AGE:

20 to 30	3
30 to 40	6
40 to 50	11
50 to 60	22
60 to 70	11
70 to 80	16
80 to 90	1

X-RAY LESIONS and SOME SUGGESTIONS AS TO THEIR PREVENTION AND TREATMENT

M. B. CULPEPPER, M. D.,
Carlsbad, N. M.

(Read before the New Mexico Medical Society, at its Forty-Sixth Annual Meeting, Albuquerque, N. M., May 10-11-12, 1928.)

Gentlemen: I can hope only to offer a few suggestions from my own personal experience, regarding this increasingly frequent and painful affection. But my main object is to increase a better understanding as to the cause of this very painful malady and the known methods of prevention; also of the treatment of these lesions. In the beginning I wish to express my gratitude, in the permission to quote Dr. C. A. Porter, (Assistant Professor of Surgery, Harvard Medical School, Surgeon to the Massachusetts General Hospital, Boston, Mass.), whose extensive experience is probably not surpassed by any other investigator in this country, and whose technic has been so successful in relieving x-ray lesions that when an inquiry is made upon the subject the minds of our leading surgeons and practitioners at once turn to Dr. Porter. I am also deeply indebted to Dr. H. M. Doolittle of The Dallas Medical and Surgical Clinic of Dallas, Texas, for his wonderfully thorough and painstaking efforts in the relief of my own painful lesions, and should any of you be so unfortunate as to have acquired similar lesions I would suggest that you at once refer the matter to one of these very able men.

SYMPTOMS

The first indication of any trouble appears in the shape of a red, itching rash. This condition is succeeded by callosities on the back of the hand or fingers which change into warty growths or keloids; these break down and form ulcers which resemble burns. No pen can describe the sensitiveness or the pain of these burns. The left hand seems to have the affection much more often than the right. The amount of pain which a patient suffers is variable, though usually extreme. From Dr. Porter's experience and personal communications from patients, he believes that the agony of inflamed x-ray lesions is almost unequalled by any other disease. Its character has been described, and varies with individuals. The pain seems to be due, in some instances, to the exposure of irritated nerve endings in a raw ulcer like the "erethystic" varicose ulcer of the leg, to suppurating nail beds, irritated by small pieces of nail, and, in acute burns, very probably to a definite neuritis. In the more chronic cases, he believes that the microscopic sections show quite clearly that the pain is caused by the cicatricial contraction in the thickened corium compressing the nerves. Without regard to the particular cause of the pain, in either the acute or chronic cases, adequate excision of the lesions has invariably given immediate relief.

PALLIATIVE TREATMENT

The palliative treatment of these chronic x-ray lesions must be left in a great measure to the personal experience of the individual. Relief from pain and improvement often take place under remedies which in another patient are most painful and harmful. In general, dry treatment, when it can be borne, combined with protection has seemed to be most beneficial. At times, local anesthetics must be used, preferably a weak solution of cocaine upon two layers of compress cloth. Of the washes, simple salt solution or aluminum acetate are valuable. If infection is present, citrate of silver (1-6000) has been very useful, according to Dr. Porter. The keratoses may be softened with a solution of caustic soda and shaved down with a sharp knife or pumice stone. If infection is present, nitrate of silver (1-fuse, and ulceration not rare. The actual cautery which several have used, while temporarily destroying the condition, seems to invite recurrence on a larger scale. Sparking with high tension current has been tried by various radiographers with temporary improvement, but no permanent benefit.

After months or years of treatment, or neglect of treatment, carried out with more or less relief upon various lines, the early x-ray worker usually finds that while the general condition of the hands may have improved somewhat, either certain keratoses recur after removal, or the nail beds are affected, or that after healing and breaking down several times a particular ulceration finally refuses to heal. The lesions are chronic, moderately severe, recurring, eventually persistent. The first question usually asked is, "Should x-ray work be given up?" While it is obvious that to do this would be conservative, I feel personally convinced that no harm results from x-ray work carried out with all modern precautions. It is easy to give this advice, but only in exceptional instances is the advice conscientiously carried out. The second question, "What is the danger of cancer?" Provided ulcerations have not persisted for more than three months or have not occurred at the site of inflamed keratoses, I believe it to be slight.

SURGICAL TREATMENT

Acute and sub-acute burns. The technic as described by Dr. Porter: Hand raised for ten minutes and rubber tourniquet applied

about base of finger. With a bared Parker blade, he then excises the whole lesion with an eighth of an inch margin, doing the dissection carefully in a bloodless field. If, as he believes, the excision will extend down to, but not into the extensor tendon, leaving a good deal of it exposed, immediate skin-grafting is impossible. He dresses such cases with several layers of bandage cloth cut of a sufficient size to overlap the margin of the wound one-eighth of an inch. He then applies gauze and splint and pressure bandage. Previous to operation he disinfects such lesions with a carbolic acid poultice 1:40 for twenty-four hours. This is usually painless, and he prefers it to any other disinfectant. The dressings may be left in place, if painless, for several days, but if the wound requires dressing he uses a hot sterile salt solution soak, and all but the two bottom layers of bandage cloth may be removed and sterile salt solution dressing applied until granulations appear over the extensor tendon. Usually this requires about a week. He then cuts a Thiersch graft from the inner side of the same arm, planning to have it overlap the raw area, but just to meet the skin. This is held in place by a few very fine silk stitches passed first through the graft and then through the skin edge. Over the graft he applies perforated cellulo-silk which is wrapped about the finger and dressed with gauze moistened in sterile salt solution, and pressure, in order to prevent the formation of collections of serum under the graft. He thinks it is found best to place the entire hand on a splint rather than to attempt to put one on the finger alone. One is tempted not to suture this graft, but he has found that a few stitches keep them from creeping. The treatment, whether conservative or operative, must depend upon the individual experience of the operator and the choice of the patient. (If skin grafting is successful, there can be no doubt that the result will be most satisfactory, and to my mind should be advised.)

Keratoses. Until recently, Dr. Porter's personal experience led him to believe that simple, uninflamed, non-ulcerating keratoses were benign, but he is now convinced that there are exceptions, and that all keratoses which show a tendency to dip below the level of the surrounding skin should be regarded as suspicious. Microscopical examination of many of those which he has removed showed all stages from a perfectly harmless condition to beginning invasion of the corium. Dr. Porter has been so successful in the treatment of these cases by Thiersch grafting that he personally advises it in all of the more severe x-ray lesions. After two failures in using skin for these grafts from parts to some degree affected, he is convinced that sound skin never subjected to the x-rays has more vitality.

PREVENTION

The modern methods have taught us that lead, either in combination with other substances, or alone in sheets of various thickness, is our most practical protection or agent of protection. Lead glass and lead rubber are the agents most practical in the x-ray rooms. X-ray rooms should be lined with sheet lead, or lead screens should be arranged in the x-ray room so as to cut off as much of the ray from the operator as possible, for the difficulty is that too often we do not realize danger until we have become severely injured.

SOME OBSERVATIONS AND DEDUCTIONS ON THE COURSE FOR COMMANDING OFFICERS AND EXECUTIVES. (Medical)

Held at Fort Sam Houston, Texas,
Oct. 28 to Nov. 10, 1928

CLARENCE EDGAR YOUNT, M. D.
Colonel Medical Reserve Corps
Prescott, Arizona

The order assigning a Reserve Corps officer for a period of training at Fort Sam Houston, presages the inspiration that traditionally follows a tour of duty at this important army post.

San Antonio, which now boasts a population of 262,000, traces its history back to the little Indian village on the San Antonio River, whither the Massonites came after having been driven out of Mexico by the Aztecs. The founding of the present San Antonio dates from the establishment of the Mission of San Francisco de Tejos (St. Francis of Texas), by Don Alanzo de Leon in 1689. It has owed allegiance to six flags. The defense of the Alamo links it traditionally with Bunker Hill and Concord; the names of Austin, Sam Houston, Bowie, Travis and Davy Crockett identify it with the makers of American history.

San Antonio was an important military post during the Mexican and Civil wars and was made the greatest military training center in the United States during the world war, eight camps having been located here.

The War Department owns in and near San Antonio 28,624.76 acres of land upon which the improvements and land valuations are estimated at $27,411,024.41. To this will soon be added in contemplated construction, $15,000,000 for the new Randolph Field.

The following units have been allocated

to this area: Headquarters Eighth Corps Area, Fort Sam Houston, Camps Stanley and Bullis, Eighth Corps Area Depot, Arsenal, Air Corps Depot, Kelly Field, Brooks Field, Q. M. Depot—Normoyle, with a total of 550 officers, 92 warrant officers, 7377 enlisted men and 1469 civilian employees.

Quoting from the Station Hospital Sanitary Report for 1926, "The climate, while very hot in the summer months, is considered satisfactory for the maintenance of large bodies of troops - - the highest temperature during the year was 101° F.; the lowest 26°F., there were 112 clear days, 144 part cloudy and 109 cloudy days - - -. The total precipitation for 1926 was 30.39 inches with a relative humidity of 80%." General A. J. Bowley, in a recent address before the Chamber of Commerce of San Antonio, stated that, "The climate is excellent for all year training. This makes it relatively economical to train soldiers in this vicinity."

One of the most important sanitary requirements for large bodies of troops is an abundant supply of pure water. This Fort Sam Houston has, sharing the water supply of San Antonio, "which is from deep artesian wells and needs no purification - - - No sample has ever been found lacking in potability, while from a bacteriological standpoint it is of excellent quality."

THE CLASS

Nineteen officers of field grade were selected for this year's training period, quartered in one of the unoccupied wards of the Station Hospital and messed at the Officers' Mess.

From the moment of our reception by Major Wm. W. Southard, M. C., training officer, through the short stirring addresses of the Corps Area Commander, Brig. General A. J. Bowley, the Corps Surgeon, Colonel H. H. Rutherford, the Commanding Officer of the Station Hospital, Colonel E. L. Ruffner, and throughout the hours of demonstrations and conferences, to the demobilization of our class, there prevailed the most cordial and helpful relationship between student officers and those of the regular establishment.

A condensed schedule of the course follows:

COURSE FOR HOSPITAL EXECUTIVES

Monday, Oct. 29:
8:00-12:00 a.m.—Enrollment and assignment to quarters.
1:30- 3:30 p.m.—Physical examinations.
7:15- 8.15 p.m.—Clinical conference.

Tuesday, Oct. 30:
8:30 9:00 a.m.—Address by Commanding General.
9:00- 9:30 a. m.—Address by Commanding Officer.
8:30- 9:00 a.m.—Address of Commanding General.
9:30- 11:30 a.m.—Assignments and conferences on section work.
1:30- 3:30 p.m.—Conference—The Medical Reserve Corps; Organization, Administration and Function.

Wednesday, Oct. 31:
8:30-11:30 a.m.—Section work (see section schedule).

Thursday, Nov. 1:
8:30-11:30 a.m.—Section work (See section schedule).
1:30- 3:30 p.m.—Conference: Mobilization plans and procedures.

Firday, Nov. 2:
8:30-11:30 a.m.—Section work (see section schedule).
1:30- 30-30 p.m.—Obtaining hospital supplies. Demonstration of Medical Supply Depot.

Saturday, Nov. 3:
Section work (see section schedule).

Monday, Nov. 5:
8:30-11:30 a.m.—Section work (see section schedule).
1:30- 3:30 p.m.—Conference on Command and Staff with particular reference to M. D. Units (Corps Area Headquarters).
7:15- 8:15 p.m.—Clinical Conference.

Tuesday, Nov. 5:
8:30-11:30 a.m.—Section work (see scetion schedule).
1:30- 3:30 p.m.—Conference and demonstration—The Medical Regiment.

Wednesday, Nov. 7:
8:30-11:30 a.m.—Section work (see section schedule).

Thursday, Nov. 8:
8:30-11:30 a.m.—Section work (see section sceduled).
1:30- 3:30 p.m.—Visit to School of Aviation Medicine, Brooks Field.

Friday, Nov. 9:
8:30-11:30 a. m.—Conference and review.
1:30-3:30 p.m.—Demobilization of Class.

Station Hospital
Fort Sam Houston, Texas,
October 21, 1928.

MEMORANDUM No. 21.

1. The following section schedule for Rserve Officers ordered to this hospital for training as Hospital Executives is published for the information and guidancec of all concerned:

2. For the section work, the facilities of this hospital are divided into eight departments as follows:

a. Commanding Officer and Executive Officer.
b. Adjutant and Personal Adjutant.
c. Mess Officer.
d. Medical Supply Officer.
e. Registrar.
f. Medical Service.
g. Surgical Service.
h. Laboratory Service.

3. Practical instruction in these departments will conform as far as possible to the following outline. The Chief of Service or Section concerned will be responsible for the variation of this schedule to meet the needs of the officers under training.

a. Commanding Officer and Executive Officer:
General organization and administration of hospital.
Hospital inspections.

b. Adjutant and Personal Adjutant:
Routine duties.
Preparation of rosters and service.
Preparation of orders and details.
Filing and preservation of records.
Preparation of pay cards, pay rolls of enlisted personnel and civilian employees.

Preparation of monthly rosters of officers and enlisted men.
Preparations of monthly strength returns and returns of detachment, Medical department.

c. Mess Officers:
Purchase, storage and distribution of subsistense stores.
Preparation and serving of food.
Preparation of bills of fare with reference to market conditions and money value of food items as compared with food value.
Inspection and grading of food supplies.
Mess organization and management of mess personnel.
Study of channels through which the bed patient is supplied proper food.
Special, extra diets—use and abuse.
Prevention and waste in food.
Care of kitchen and mess equipment.
Inspection of mess.
Reports and returns and methods of accounting.

d. Medical Supply Officer:
Requisitioning and buying supplies.
Storage and inspection of supplies.
Internal requisitions and issues of supplies to the hospital.
Reports and returns.
Maintenance of equipment and disposition of unserviceable articles.

e. Registrar and Commanding Officer, Detachment of Patients:
Study of general duties as outlined in Army Regulations No. 40-590.
Study of sick and wounded regulationh as outlined in A.R.40-1025 to 40-1080 inclusive.
Study of clinical records from the admission of patient through the various channels to final disposition.
Checking of clinical records.
Preparation of pay rolls.
Preparation of final statements and clothing settlements.
Indexing and filing of clincal records.
Study of the standard diagnosis terms.
Preparation of charts, statistical reports, tables and other reports and returns.

f. Medical Service:
Admission and disposition of patients.
Ward administration and sanitation.
Preparation of clinical records and other ward reports.
Property responsibility.
Equipment and supplies.

g. Surgical Service:
Admission and disposition of patients.
War administration and sanitation.
Preparation of clinical records and other ward reports.
Property responsibility
Equipment and Supplies.
Operating room administration.

h. Laboratory Service:
(1) Clinical Laboratory Section:
Organizations and administration.
Receipt and handling of laboratory specimens.
Equipment and supplies.
Property responsibility.
Records and reports.
(2) X-ray Section:
Organization and administration.
Receipt and handling of patients.
Equipment and supplies.
Property responsibility.
Records and reports.

4. The class will be diveded in eight groups.

It must be apparent to any Medical Reserve Officer, reading the foregoing synopsis, that this program of eleven days intensive training covers the mission with meticulous care. It is intensely specific and practical as to the function and administration of the military hospital, yet broad and elastic enough to include demonstrations of the vast stores, methods of procurement and issue of the Corps Area Medical Supply Depot; a demonstration by the Second Medical Regiment, a conference on Command and Staff with special refernece to Medical Department units; Mobilization, outlinnig our duties, particularly in first phase assignments. All of these demonstrations and lectures were conducted by officers eminently fitted by years of special study and preparation to discuss their subjects and present them with an authority and clarity intended to inspire. The round table conferences following, than which there is no better and expeditious method of eliminating formality, encouraged each student officer to ask those questions which for him tended to clear up the mooted and obscure points that have arisen in his mind since his world war experience or his last training period, and which the correspondence courses and bulletins have somehow failed to elucidate.

Concerning the Monday night clinical conferences, two of which our class had the good fortune to attend,—"All officers of the Medical Corps and Dental Corps will attend. The character of these conferences is purely professional. The purpose is to present cases and papers on profesisonal subjects for discussion." They demonstrate in no uncertain manner how, in military hospital management, interesting clinical material in each section may be utilized for the instruction of all medical officers (Medical Officers from all units in the immediate vicinity were present). As refresher courses they materially assist in preventing the specialist from falling into the rut of specialism, the surgeon serving with troops or on the staff from the professional deterioration sometimes occurring as the result of the limitation of his duties. Further, these clinical conferences encourage the Reserve Corps internes to prepare for presentation and discussion through their chiefs of service, cases of unusual interest in which they have secured accurate case histories, including all the necessary scientific data. The net result is a perpetuation of the inter-dependence of medicine, surgery and the laboratories, by the medical officers, to the end that the patient shall have the best that army hospitals can give in scientific care and treatment .

In conclusion: There are many and di-

verse reactions which come to the medical officer who has been privileged to attend such a course of instruction as the one outlined, and the following deductions are submitted:—

(1) Army Contact: The uniform is taken from the old locker, slightly altered by your civilian tailor to meet the ever advancing waist line, cleaned and pressed, you put it on. You have been a part of the Army of the United States, but your order giving you an active duty status brings you again in close contact with those whose life work is "service with the colors." You fully realize that your training period ends in fourteen days, but as these days rapidly pass, crowded with intensive instruction, you discover ere the class is demobilized that you are again in step with those who mould progress, your contact with the army has been pleasant, your instruction very practical. You have discovered and renewed many old friendships, for the army is a cosmos wherein the change of station is the commissioned personnel in molecular motion.

(2) Evaluations: We opine that the Corps Area Surgeon, through personal contact, supplemented by that of his staff of instructors, will be able to make certain evaluations respecting each officer attending the training school, which were not otherwise possible. His assignment of personnel to Reserve Corps units will reflect the factors of capability, adaptability, efficiency and zeal for the service, in a new light.

Should army appropriations ever be adequate, the training of all reserve officers of all branches of the service would prove almost as valuable for the evaluations possible as for the training given. There would then be fewer "misfits" in the event of a major operation.

(3) The Reserve Officers on a peace status: If we consider the cost to the government of the training of the individual officer we may have some doubt as to the two weeks' duty status returning to the government value received, especially when the officer must travel, as is often the case in the Eighth Corps Area, in excess of 2000 miles and spend four of his fourteen days en route from and to his home station. However, in addition to the material value of personal training, we introduce another factor, the unknown factor "X" expressed in the "ultimate effect of training." If you please, this fourteen days' training of the Reserve Officer is an "inoculation" against the military ennui of civil life and the spirillum of pacifism. The antibody, patrioitsm, must give an active immunization which should hold at least until the next period of active duty.

Properly immunized we contact our representatives in Congress—we know them personally and can bring to their attention in a peculiarly frank manner the needs of the army as we know them and as we have seen them.

We can, and should, give a certain portion of our time to the mastery of some of the intricate duties and tactics of our Corps, through correspondence courses, attendance at lectures and the study of army publications. We can acquaint our friends and neighbors with the patriotic value of an adequate national preparedness as opposed to militarism.

Lastly, in a class whose officers are of field grade and many past fifty years of age, we should be looking to our "replacements." It will take years to develop and train them so we will begin with C. M. T. C., securing and encouraging trainees from among the best of our youth. Then we will urge upon that superb class of young men who fill our universities, the value of enrolment under the Professor of Military Science and Tactics. We will encourage them to carry on through their college course. A commission their intrinsic reward; the military knowledge acquired a measure of preparedness which they in time of peace may place on the altar of National Patriotism.

THE RELATION OF BLOOD PRESSURE TO DISORDERS OF THE NERVOUS SYSTEM

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We are living a high tension life. We do not rest or sleep as much as nature demands. We eat improper foods at improper hours, drink injurious stimulants to excess, and, worse still, spend hours, days and weeks of anxiety and worry over our affairs. As a result, the two most common and disabling conditions of which we are victims are disorders of the nervous and circulatory systems.

Heredity and environment play a part in our health and all the affairs of our life. We inherit certain elements of strength and weakness from our recent and remote ancestors. We cannot escape heredity. Some of us inherit an excess of reserve nerve energy, more than sufficient to enable us to carry on through the stress and strain of a strenuous life. Others inherit an insufficient supply of reserve nerve energy. Such persons fatigue quickly under stress and strain, and unless the supply is carefully conserved, neurasthenic states, nervous breakdowns and actual psychoses result.

There are so-called high tension families. In such families, high blood pressure is of

common occurrence. There is a tendency to early arterial degeneration, with a history of many sudden deaths from so-called heart failure, and cerebral arterial breaks and occlusions. Other families may be classed as low tension families, in whom arterial degeneration is rare, even in advanced age, but nervous disorders may result from abuses and excesses, and failure of the heart muscles from over strain.

Science enables many of us to escape some of the evils to which we have inherited tendency. Or, by an improper system of living, we may bring upon ourselves evils to which we have no inherited tendency.

Society, of which we are an integral part, makes our environment. It matters not so much what our environment may be, we may change it, to some extent, at least, if it does not suit us. Or, by a proper reaction to our unpleasant environment, we may escape the evil results.

Blood pressure is modified by various so-called toxins, infectious and toxic substances. Some of these toxins are generated within the body, others are introduced. Any toxin which causes an increased heart action, with an increased pulse rate, continued over a considerable period of time, tends to cause permanent arterial narrowing, and a permanent elevation of blood pressure. Hypersecretion of the thyroid gland, through irritation of the sympathetic nervous system, causes an increased heart action, also an arterial narrowing, and a temporary elevation of blood pressure. If this condition continues over a long period of time, either one of two conditions may result: a permanent high blood pressure with enlargement of the heart, or a weakness of the heart muscle to such a degree as to result in heart failure.

It is generally conceded now that goitre is the result of an insufficient supply of iodine, especially in the growing child, and that it may be prevented if iodine is administered during the adolescent period of life. It is well to combine the iodine with calcium salts, as many of these patients are deficient in calcium. I think it is well to have children use the brand of salts in which iodine, calcium phosphate and sodium chloride are combined, rather than the sodium chloride alone, as a seasoning of their food.

We hear much of the influence of focal infections upon blood pressure. In many cases, during the early period of focal infection, the blood pressure is decreased, due to a general nervous depression, but if focal infections are neglected, the result is frequently a raising of the blood pressure due to a general arterial sclerosis or a renal arterial sclerosis. Sinus, tonsil and teeth infections are the most common offenders along this line. Chronic appendicitis and chronic gall bladder disease may also be responsible. In short, no focal infection should be neglected.

Many of the infectious diseases, by their arterial irritation, tend to cause permanent elevation of blood pressure; syphilitic infection, especially, tends to arterial degeneracy. Every patient with a nervous disorder should be carefully investigated for syphilis; patients showing any tendency to arterial change, should be so investigated. Many of the evil results of a syphilitic infection may be avoided by early treatment, effects both upon the nervous system and the circulatory system.

The so-called auto-intoxications resulting from bad metabolism, also tend to encourage arterial degeneracy, with resultant high blood pressure. Anything tending to an acidemia or reduced blood alkalinity, may result in arterial degeneracy with resultant high blood pressure. This condition may be the result of drinking an insufficient amount of water, with improper elimination. It may be the result of chronic infections, excessive exercise, insufficient amount of rest, morbid mental states, with worry and agitation, and insomnia, in short, anything that tends to induce a state of excessive and abnormal fatigue; the eating of improper foods or improperly balanced diet. Acids are end products of red meat metabolism. An excessive diet of such meats tends to produce a condition of lowered blood alkalinity. The fruit acids and vegetable acids, during their transformation in the body, form alkaline products. It is well that a meat diet be balanced with a diet of vegetables and fruits. In families in which there is a tendency to arterial degeneration, red meats should form a very small part of the dietary; they should be replaced by dairy products, eggs, fruits, vegetables and cereals, and such persons should consume water in rather large quantities. It is my opinion that water is very important, both as a preventive and curative agent, and many of the ills, especially of a circulatory and nervous nature, may be avoided by the consumption of water in more than the average quantities. I find very few nervous patients are good water drinkers. Many of the mental cases who come to me for consultation and treatment, give a history of drinking very small quantities of water. They have decreased alkalinity of the blood, and are quite well saturated with toxic products.

Beverage drugs, especially tea and coffee, are heart stimulants and nerve irritants; used to excess, the result is overaction of the heart and irritation, with fatigue of

the nervous system and insomnia. They should not be used by young children.

The excessive and long continued use of any drug is injurious. The variety of drugs used habitually is very great. Such drugs as aspirin, the barbital preparations, chloral, bromo seltzer (which contains acetanilid) the various opium derivatives, all sorts of headache powders, if used to excess as to time or quantity, are injurious and poisonous to the nervous and circulatory systems. They act as arterial irritants, tend to produce arterial changes and increase blood pressure, as well as fatigue and exhaust heart muscle. The indiscriminate use of luminal by physicians and the laity is especially fraught with danger. It is phenolbarbital, and the phenol or carbolic acid ingredient is a kidney irritant and tends to induce a nephritis or intensify a nephritis already present. I have received patients who have been diagnosed as having brain tumor. with most of the cardinal symptoms, such as stupor, ataxia, nystagmus, vertigo, from its excessive use. These drugs, and many others, may, in addition to acting as nervous and circulatory irritants, cause actual insanity. It is also known that tobacco, if used to excess by any one, and even in small quantities by some persons, is a nerve and circulatory irritant, causing nervous irritability, increasing nervous and circulatory tension. It is especially injurious during the adolescent period of life, and should not be used. if used at all, until after maturity. Alcoholic beverages, in my opinion, have considerable medicinal value, taken in moderation. In excess, they are nerve and circulatory poisons, cause arterial sclerosis,. with high blood pressure. This is especially true of the "boot-legger's" products, which have not been purified and contain many poisonous substances. I am disposed to the opinion that the health of the public would be benefited, if all such beverages were dispensed to the public under the government's stamp of inspection, from government stores, rather than the old-time saloon, of such quality and at such a price as would put the "boot-legger," with his deadly beverages, out of business.

Nervous tension is inborn in some of us; in others, is the result of our environment. Worry and anxiety is the inevitable result of our modern tenseness of living. It is the cause of mental, physical and financial failure of innumerable individuals. Many men assume responsibilities of a business or professional nature too great for their capacity, and soon begin worrying, because of fear of failure. They become obsessed with the idea of failure, unable to give attention to the daily business, the business is neglected and soon goes on the rocks, if some one does not step in and take the helm. This worry and anxiety born of fear, increases nervous tension and circulatory tension, with high blood pressure at first; later, when extreme fatigue comes, with physical exhaustion, the blood pressume may be abnormally low, but in many cases, if the nervous tension continues over a considerable period of time, irreparable damage is done to the arterial walls and high blood pressure is a permanent result. Many business and professional men, having plenty of ability to carry on with their business successfully, as a result of working too hard at the job, become chronically fatigued; then fear creeps upon them, fear of failure, both of health and fortune, worry and anxiety take possession of their minds; they lose the power of attentive control, and the result is the same, unless they leave their business and receive proper treatment, which will restore their depleted store of reserve nerve energy, and bring it back to normal balance.

Worry and anxiety, with morbid fears, may be seen at almost any level of life. The school boy and girl have these morbid fears, and many must give up their school work because of their fears, and not an inconsiderable number commit suicide. Our modern schools and our modern school teachers are largely responsible. The curriculum seems to be prepared for the exceptional child. Those who are slightly subnormal, and many of those who are average, must strive beyond the point of their endurance to do the scheduled work. They are unable to restore during the periods of rest, the energy consumed during the periods of activity. Fatigue results. They become discouraged and fear of failure haunts them. Many teachers are unkind and impatient, when kindness and patience are so much needed, constantly criticizing the child's poor work, even in the presence of other pupils, so that even though the child may be able to struggle on through school, in many cases, an "inferiority complex" is developed in the mind of the child, which persists, and is a potent cause of failure all through life. Parents, by their critical attitude and by calling attention, in an unsympathetic manner, to the child's faults, may produce the same results. Threatening punishment of children, and frightening them, are factors in the development of a nervous tension, which encourages a circulatory tension as well.

The woman who strives for social position is a victim ofttimes of excessive fatigue; a high tension of the nervous system, and may, as a result, show early arterial degeneration, high blood pressure, and the numerous disabilities accompanying.

Morbid fear is perhaps the most common symptom in medicine. Our fears are born of the yesterdays and tomorrows. Because of our early training, or of some of our past experiences, we fear to meet the future. It may be because of some indiscretion we have magnified into a gross sin—even the so-called unpardonable sin—and we fear for our future here in this life, or in the life beyond. I have had much occasion to ponder as to what the unpardonable sin might be, as I have had hundreds of patients who alleged a commitment of the unpardonable sin, but no two of them have committed the same act.

We fear death; we fear life; we fear infections of all kinds; we fear heart disease, insanity, cancer, leprosy, syphilis, and almost every disease to which flesh is heir, none of which we have today, but may have tomorrow.

All persons with morbid fears have high nervous tension, and if the fear persists, have high tension of the circulatory system.

The question can well be asked, but not easily answered, "What is high blood pressure?" It is regarded as a pressure above the normal average, but what is the normal average? Some tell us it is a pressure equal to the age of the individual, plus 100. This, in my opinion, is too high. The average man or woman of 40 does not have a pressure of 140. Nor does the average man or woman of 80 years, have a pressure of 180, systolic. Just what the average is, I do not know. Some persons of advanced years have a blood pressure quite low. It is my opinion that a systolic over 160 at any age, is a dangerous pressure, or a diastolic pressure persistently over 90 is, I believe, dangerous.

Blood pressure depends upon two factors. The force of the contraction of the heart muscle, and peripheral resistance to the blood stream. The muscles of the heart and arteries are under the control of the sympathetic and autonomic nervous systems. A stimulation of the autonomic system slows the heart and dilates the arteries. A stimulation of the sympathetic system increases the rapidity of the heart and contracts the arteries. In all states of high nervous tension, in mental states of fear, worry, and anxiety, the sypmathetic nervous system is over stimulated; the heart is more rapid in its rhythm. The arteries are contracted and blood pressure is increased, until the nerves and muscles of the arteries become excessively fatigued, when blood pressure may be dangerously decreased, even though arterial sclerosis, or hardening of the arteries has already supervened.

Arterial sclerosis is a condition in which the arterial walls have undergone a degenerative process, and lime salts have been deposited in the walls. Such arteries are less elastic; they offer greater resistance to the blood stream, and if the heart is able by more powerful contraction, to overcome this resistance, an increased blood pressure may result, although in many cases of arterial hardening, there is not a high blood pressure; on the contrary, the pressure may be extremely low. This is an alarming symptom, as arterial occlusion is prone to develop in such cases.

Some of the early symptoms of arteriosclerosis may be divided into three classes. In the first class, they are referable to the heart, and consist of shortness of breath on exertion, palpitation and discomfort in front of heart, or severe cramp-like pains in chest. In the second class, they consist of ready fatigue, lassitude, nervous irritability, disturbed sleep, vague pains in the back or limbs, and varying combinations of functional nervous derangements of the stomach. In the third class, the first indications are dull headache, vertigo, noises in the ears, and occasional attacks of aphasia, or hemiplegia, or there may be slight blurring of vision, due to small retinal hemorrhages. In some cases, epileptic convulsions, occurring chiefly at night, are early symptoms.

Results of high blood pressure: High blood pressure is recognized as one of the principal results of arterial sclerosis, or hardening of the aretries. It has been well said that "a man is as old as his arteries." A hard, non-elastic, degenerated artery is one of the accompaniments of old age, and is indicative of old age. A common result of arterial sclerosis, either with or without high blood pressure, is cerebral palsies. These usually occur in the nature of a hemiplegia or a paralysis of one side of the body. If there be an endarteritis, with arterial degeneration and low blood pressure, occlusions of arteries are common, and it is my opinion that thrombosis is the most common and frequent cause of hemiplegia. If the cerebral arteries be degenerated and weakened, and the blood pressure be very high, an arterial rupture may occur, giving a cerebral hemorrhage as the cause of hemiplegia. Chronic nephritis also results from high blood pressure, and a nephritis, with hardening and degeneration of the arteries in the kidney, may be the cause of a high tension. So-called heart failure, which is given so frequently in the daily press as the cause of death, may result from high blood pressure, with arterial sclerosis and occlusion of the coronary arteries.

High blood pressure may be one of the causes of certain psychoses. These psycho-

ses may be of the nature of an agitated or depressive type. A high blood pressure may cause disturbance of any organ within the body. Digestive disorders are common, weakness and fatigue of the muscles are frequently seen.

Summing up then, the causes of high blood pressure, we find that drugs, diet, toxins, exposure, overwork, and mental states, are the most important. The treatment of the condition, of course, should first be preventive. The excessive use of drugs, of all forms, should be avoided; the diet should be well balanced, avoiding an excess of those food products which tend to lower the alkalinity of the blood. Toxins should, in so far as possible, be eliminated. Elimination may be increased, in most instances, by the drinking of water and milk. Excessive exposure and overwork should be avoided. We should always endeavor to maintain a proper balance of our reserve nerve energy. When we work to the point of fatigue, we should then rest until the fatigue and fatigue products are eliminated.

Morbid fears, worry and anxiety are all depressive emotions. Nothing is ever accomplished by them, but much evil may result. They are responsible for so many of our disabilities that we should have a philosophy of life which will prevent us from yielding to such emotions.

Every man has, or should have, a philosophy of life. He may be in possession of the very best and not know of its existence; having the very worst, he may pride himself as a paragon. I wish to point out a philosophy which will fit any life, or any situation in life. In other words, a handle which will fit our life tools, to point out a path in which the wayfaring man cannot go astray. It is not a complicated system nor a formal plan, but simply a habit, as easy or as hard to adopt as any other habit, good or bad. In our earliest infancy, we begin the formation of habits, both muscular and psychic. Life is a habit, a succession of actions that become more or less actions of the same kind.

Plutarch says that "Character is a habit of long standing." The way of life which I desire to present for consideration, is a habit to be acquired gradually, by long and steady repetition. It is a practice of living for the day only, and for the day's work. Live, as Sir William Osler has said, in day-tight compartments. Carlyle says our main business is not to see what lies dimly in the distance, but to do what lies clearly at hand. The workers in Christ's vineyard were hired by the day. In His prayer we are told to ask for our daily bread. We are forbidden to take any thought of the morrow. This way or philosophy of life has perhaps been less universally practiced than any other. Since the chief worries of life arise from the foolish habit of looking forward and backward, there is peace for the anxious and worried man if he looks neither backward to the past, nor forward to the future. The chief factors of safety of the great ocean liners, are the fore and aft water-tight compartments. By touching a button on the bridge, the great iron bulkhead doors can be closed, shutting out all communication between the various compartments.

The safety of our today depends to a very great degree upon our ability to touch a button and hear at every level of our lives, the aft doors closing and shutting out the past, the dead yesterdays. Also, to touch another and shut off with the forward bulkhead doors, the future—the unknown tomorrows. It is not easy to disregard the past; it haunts us like a shadow. We should learn to bury deep in the oblivion of each night, the joys and sorrows, the disappointments, the mistakes and sins, the petty annoyances, the real and fancied slights of the day.

George Herbert says: "Undress your soul at night, not by self-examination, but by shedding, as you do your garments, the daily sins, whether of omission or commission—and you will waken a free man with a new life." Look back on rare occasions for stock taking, but not for any other purpose.

We can have no greater handicap in our course than that of carrying the habit of retrospection and introspection, letting the mistakes of yesterday paralyze the efforts of today, hugging the worries of the past to our destruction, allowing the worm "regret" to canker the very heart of our lives. St. Paul said he died daily and thereby insured the resurrection of a new man and made each day the epitome of a new life.

The future should be shut off as tightly as the past. No fearful anticipations, no dreams, no visions, no fantasies, castles in the air—with which hearts are broken, heads are turned. The tomorrow has no certainty except through today. The uncertainty of tomorrow is a proverb, yet we may all have the secret. The future is today, there is no tomorrow.

The day of man's salvation is now. The life of the present, of today, lived intensively, earnestly and sincerely, with no forward looking thought, is your only insurance for the future. We should make the limit of our horizon a twenty-four-hour circle. We should shut tightly and keep closed the great

fore and aft bulkheads of our lives, and constantly cultivate the habit of a life of day-tight compartments. The acquisition of the habit takes time, just as does the formation of any habit. The way is not hard if we will sincerely persist in our efforts to find it. If we learn to live our lives in day-tight compartments, we shall be better able to bear our own burdens and the burdens of others; we shall find more of happiness; we shall be able to travel much farther on the way which has been blazed for us by strong men, into whose labors we enter and whose ideals must be our inspiration.

The way of life which leads us into day-tight compartments, offers far more of joy and less of sorrow, less waste of energy, mental distress, nervous worries and morbid fears, more power of attentive control and mental concentration to the work which is immediately at hand, and crying to be done. It is an insurance against failure, and for success.

In spite of all our efforts at prevention of circulatory tension, high pressure cases will consult us for the various disabilities resulting therefrom. The problem confronting us is how to aid the patient. The medicinal remedies suggested for the lowering of high pressure are legion, but no specific remedies have yet been discovered, after the arteries have undergone degeneration and the heart has developed a compensatory enlargement.

The so-called essential hypertension, however, may yield to a removal of the cause. The cases resulting from nervous high tension and the depressive emotions may especially be helped, by correcting the abnormal nervous and mental states. Moderate exercise is beneficial. I am not a believer in long periods of confinement to bed and a restricted diet as a treatment of essential hypertension.

Some five years ago, I was called to see a woman of 62 years, who was having some transitory palsies. She gave a history of two years of confinement to bed and a starvation diet, for the treatment of high blood pressure. She was greatly emaciated and very weak. Examination showed a systolic pressure of 270; a diastolic of 170; no appreciaable arterial degeneration; no nephritis. I advised that she get out of bed, go to work, eat anything and plenty of it. Her pressure quickly dropped; she gained in weight. Today, her systolic pressure varies from 150 to 170; diastolic 80 to 100. She weighs 170 pounds, does her own work in conducting a boarding house, even doing her own washing. What is the answer? She had decreased alkalinity, due to starvation and poor elimination, with a high toxic state. But, most important was the fact that she spent her time in bed worrying constantly over her condition. In my opinion, her high tension was chiefly the result of her unhappy and depressed mental state. This was corrected by putting her to work. The original cause of her high tension was perhaps due to domestic worries.

Other general factors in the treatment of high tension are: massage, neutral baths, sun baths, sufficient sleep and rest, good elimination, proper nutrition by a well balanced diet, a mind at peace and contented, neither regretful of the past, nor anxious concerning the future.

The medical treatment of arterial hypertension consists of such remedies as liver extract and theobromine. The theobromine can be given in five grain doses, combined with luminal, one-fourth to one-half grain. The luminal, however, should not be given if there be evidence of nephritis, and if given, the urine should be examined frequently.

The general treatment of nervous high tension is a correction of bad habit of worry, rest, proper diet, and mental suggestion. Physiotherapy may be used in both arterial and nervous hypertension. The auto-condensation current is beneficial in both conditions.

A CONSIDERATION OF GASTROPTOSIS

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(Read before the El Paso County Medical Society. November 5, 1928.)

The term "gastroptosis," signifying a dislocation of the stomach, is one of the incorrect terms which has crept into medical nomenclature. There may, of course, be a ptosis of the various other organs in the abdomen and this is a frequent occurrence in association with the condition commonly known as ptosis of the stomach. A short review of the anatomical relationships of the stomach will assist in the following discussion.

By its passage through the diaphragm the esophagus is fixed at this point and, in addition, we find a small peritoneal fold known as the gastrophrenic ligament, running from the stomach to the diaphragm along the left side of the esophagus. The combined action of these two attachments renders the cardia the most fixed portion of the stomach. A fold of the peritoneum known as the gastrohepatic ligament, extends along the lesser curvature and is attached to the liver. From the greater curvature we have two peritoneal attachments,

the more important, the gastrosplenic, connecting with the spleen which, in turn, is attached to the diaphragm by ligaments, and the gastrocolic ligament. Directing our attention momentarily to the duodenum, we find the duodenojejunal flexure fixed by the muscle of Treitz, which is attached above to the strong connective tissue around the coeliac artery, as well as to the left crus of the diaphragm. Therefore, we note that the stomach is suspended through two fixed points; namely, at the esophagus and the second part of the duodenum; and the most movable parts are the antrum and the pylorus, due to the relative weakness of the gastrohepatic ligament.

The last several years have witnessed an expression of many opinions as to the normal size and shape of the stomach. The idea once held, that all J-shaped stomachs were visceroptotic and deviations from the normal steerhorn type, has given way to the now accepted normal steerhorn and normal J-shaped types. When we consider the relatively low position of the stomach in what we may consider normal individuals, at least those free from any gastro-intestinal disturbance, we must realize that the diagnosis of gastroptosis is too frequently made in error and should be made with the greatest cautioin except in case with associated general visceroptosis.

In an x-ray study made by Moody, van Nuys and Chamberlain in 1923, of 600 normal individuals taken in the erect posture, we find that, in contrast to our previous conception of the high stomach, the most common position of the lowest part of the greater curvature was in the zones from 2.5 to 7.5 centimeters below the interiliac line and, in 36.3 per cent, more than 5 centimeters below the line. The most common position of the lowest part of the lesser curvature was between the interiliac line and 5 centimeters above it, of the pylorus between 2.5 and 5 centimeters above the arbitrary line.

As regards the shape of the stomach, an increase in the transverse diameter suggests atony and dilatation, while an increase in longitudinal diameter suggests the possibility of ptosis.

A true type of this condition is rare and, since it is so frequently associated with the general condition of visceroptosis, it is necessary to consider the latter condition. Although associated with a general displacement of all the abdominal viscera, it is most frequently associated with a displaced right kidney. In fact, Kemp has stated that a movable kidney with the lower border of the stomach below the commonly accepted normal point, is diagnostic of gastroptosis. There is, in addition to a sagging of the stomach, a gravitation of the right colon into the pelvis, a dislocation of the hepatic flexure and in general a more highly placed splenic flexure. Most frequently the normal anatomical relationship of the small to the large bowel is disturbed, since the small intestines are prolapsed into the pelvis. In the interpretation of these facts, however, we must not lose sight of the various types of individuals we encounter. We frequently find a patient whose general appearance suggests a relaxation of all ligaments, the heart and lungs as well as the abdominal viscera. This tall, thin, angular individual with narrow chest and a long slender abdomen with decreased antero-posterior and vertical diameter, is a frequent type and presents, I should say, about twenty per cent of our entire population but said by some authors to be as high as forty per cent. To say that all this type is abnormal would be to accuse a large number of individuals without symptoms, but certainly one of this habitus with symptoms is viewed with suspicion of gastro-intestinal disturbance. Our common clinical experience indicates that it is not the position per se that is of importance but the ability of the stomach and intestines to perform their normal functions satisfactorily.

Therefore, in interpreting our picture of the stomach, we must consider the vertical diameter of the stomach—namely, the distance from the cardia to the lower part of the greater curvature—in relation to the general arrangement of the other abdominal viscera and especially in relation to the type of individual, for what might appear to be normal in the tall angular type could easily be pathological in those of short fat habitus.

The suggested causes of visceroptosis are numerous but probably best dsicussed by considering the factors which predispose and those capable of bringing about this condition. We can scarcely question the role of heredity in the tendency to a visceroptotic habitus. Kerley and Le Wald, in 100 cases of children and infants, demonstrate abnormalities of segments in many, especially those complaining of constipation and malnutrition. It is this group in which we may recognize alteration in both the visceral nervous system and circulation as well as visceral position. They are less resistant to the usual shocks to the nervous system and many, sooner or later, show gastric disturbances following a nervous imbalance due, we think, to a relaxation of the stomach and disturbance in its function.

A failure or weakness in the musculature maintaining intra-abdominal tension, or a loss in the abdominal fat—as brought about

so frequently in wasting diseases, either acute, as typhoid fever, or chronic, as pulmonary tuberculosis, the anemias and focal infection—produces a general relaxation of the viscera.

The sedentary life maintained by so many of these individuals in association with excessive mental strain, improper diet and worry, affects the smooth muscle to some degree.

Associated disturbances of like character, such as relaxed hepatic ligaments, is still another factor.

The exciting causes in general are any conditions that have a tendency to cause a relaxation of the ligaments which normally hold the stomach in place or to decrease the muscle tone. Such a condition would be an abdomen following paracentesis, following previous pregnancies, or any condition causing a loss of abdominal fat. Moody, however, in his series of experiments, denies that the strength of the abdominal musculature plays any part in the position of the stomach.

The symptoms produced by gastroptosis are debatable. There is no single symptom, or group of symptoms which we can definitely attribute to this condition but many have been described, such as distention, a fullness of the abdomen, anorexia, a dragging sensation following meals relieved by the recumbent position, vague distress and discomfort coming on very soon after meals. However, these are likewise the symptoms of inefficiency of the muscular and secretory mechanisms and, if our original conception of ptosis is corrcet, the latter would not be present. The dragging sensation, however, may be explained on the basis of traction on the gastro-hepatic ligament. It is common experience with marked symptoms to find associated conditions present; the two I have most commonly found are atony and colitis, though chronic infections are sometime found. There are, at times, such constitutional symptoms as insomnia, headache, tachycardia, psychic manifestations, anemia, low blood pressure, tired feeling and constipation, spastic type most common, and the like; but, rather than say that these are symptoms, we must accept them as merely present in the general picture.

The appearance of the patient in the standing position is probably the most important point in the physical examination. As has been described, the patient in which this condition is most often found is the tall, thin idividual with posture that of fatigue. On standing, we note the undue prominence of the lower abdomen, with the sunken condition above the umbilicus, especially in the lateral view. This may entirely disappear in the recumbent position. Separation of the rectus, a movable kidney, a prolapsed colon, a floating tenth rib, may assist in the diagnosis.

The gastric analysis and stool examination are normal or show the characteristics of an associated condition. Most other ex-examinations have given way in favor of the x-ray.

In making the examination by means of the x-ray, both standing and recumbent positions should be used. Not only should the stomach be examined as to vertical and transverse diameters, but also as to the degree of peristalsis, the presence of adhesions and its normal relation to associated organs. The liver and kidney should likewise be noted. In the standing position the stomach will be below the iliac line and the barium gravitates to the dependent portion. Peristalsis is usually sluggish and there may be delayed motility. Occasionally cardio spasm is encountered. Under the fluoroscope it is usually possible to demonstrate that function is improved with the patient in the recumbent position.

The treatment of this condition is too vast in its scope to be discussed at this time but let us not forget that when we are paying strict attention to the general hygiene, proper exercise, suitable diet, control of focal infections and medical treatment there is yet one other factor to be considered and that is the vasomotor disturbances which are not infrequently encountered, for if the latter is neglected, treatment may very well come to an unsuccessful termination. Another factor is to discover the cause, treat it and roughly forget the size and shape of the organ. Several transfixation operations have been tried for the relief of this condition but without a very great deal of success and, except in the extreme cases, I do not feel that the present results of surgery in this condition justify its usage.

A report of the following case is typical of this condition and the complicating conditions most commonly encountered.

CASE

Case C 42. Male, white, age 26. Occupation, shoe salesman. Chief complaint recurrent attacks of headache and vomiting.

Present illness: Patient has been in poor health for years; constipation and malnutrition present since childhood. Has always been very pale. During the past five years has had frequent attacks of frontal headaches, relieved by vomiting. Vomitus usually contains a large amount of bile. Appetite poor and, following the ingestion of a large meal, there is a marked fullness and dragging sensation of the abdomen, relieved by the recumbent position. Has moderate amount of gas after meals. Diet composed mostly of vegetables. Frequentlly

is unable to go to sleep before one and three a. m. Is conscious of a fast pulse at intervals. Has never lost time from work except on an occasional day but generally has a tired and worn feeling. States that he does not know what it is to feel well. Is very nervous, high strung and irritable.

History negative.

Operations, tonsils removed in 1920.

Physical Examination: height, 5 ft. 8 in.; weight, 111 lbs. Patient is tall, is markedly emaciated, stands in a stooped position. On lateral view there is a marked prominence of the lower abdomen, out of all proportion to the upper abdomen and the diameter of the chest. In the recumbent position this prominence disappears. The skin shows marked pallor. Blood pressure: systolic 102, diastolic 70. Pulse, 96; temperature normal. Examination otherwise negative.

Urine examination, negative. Red blood count, 3,832,000; white blood count, 5,400; hemoglobin, 75. Differential within normal limits. Red blood cells showed achroma but otherwise are normal.

Gastric Analysis: After test meal, amount 250 c.c., fairly well digested. Free HCz, 50 ;combined HCl, 20. Total acidity 70.

Gall-bladder drainage: no abnormality present.

X-ray examination as reported by Dr. Turner: The stomach is large, saccular, and ptosed. It is letter J type. The cap is also relaxed but not deformed. The duodenum rests rather far to the right. No abnormality of the gall-bladder. Heart and lungs negative.

This case is reported not that it is in any sense of the word a true case of ptosis of the stomach, but because it shows the congenital history, the characteristic habitus, the associated ptosis of the other abdominal viscera, the presence of the constitutional symptoms and associated atony.

DISCUSSION

DR. F. D. GARRETT: Gastroptosis is an expression of faulty development, in most cases having its origin in childhood and early life. The Stiller habitus (the long narrow thorax, small waist, prominent abdomen, and poorly developed musculature) is sufficiently well known. Potential cases of the Stiller habitus should be recognized in childhood by the delicate physique and the state of under nutrition. Measures should be taken to stimulate these children to more normal development. They are usually over studious when they arrive at the school age and, if not encouraged, do not get enough play, recreation, and out of door exercise. A special effort should be made to see that these children correct faulty postures and, by correct breathing exercise, develop the thorax. They should be changed from indoor hot house plants to out of door boys and girls.

A relatively small percentage of cases of gastroptosis develop in later life. This condition may follow some protracted illness, accompanied by fever which has led to muscle asthenia and atrophy. This condition also occurs in women who have given birth to several children. The muscles were over stretched and sufficient attention was not paid to bringing back the muscles during the parturient period to a normal condition. More attention should be paid in cases of protracted illness and especially in the management of parturient women, to see that relaxation of the abdominal wall is corrected by suitable exercise and proper support.

A MEDICAL TRAMP ABROAD

FRED G. HOLMES, M. D.
Phoenix, Ariz.

(Read at the October meeting of the Medical & Surgical Staff of St. Joseph's Hospital, Phoenix.)

I was, first of all, a tramp, while abroad, and I believe, after confessing that work was not my duty, that I got more fun out of working and really put in more hours than if I had taken myself more seriously. It was an inspiration to associate with many of the men under whom I took work and their English was just good enough to be intelligible and bad enough to be funny, so that it made old facts seem new and pounded them home. I am going to touch on a number of subjects which were of interest to me. Some of them are widely separated from lung work but I did not confine myself entirely to any line and so added spice to the work.

I did not see any surgery to amount to anything except that in my own line of work. In general, I would say that the surgical technic is no better in Europe than that in vogue in the best of surgical circles in America. In fact, I question if the asepsis is quite as perfect as that found in our own hospitals.

Probably the most efficient, and certainly the most dramatic, surgeon whom I saw was Dr. Sauerbruck in Berlin. After the usual red tape of mask, cap and gown I found myself deposited with perhaps a dozen other visiting doctors on the observation perch. The patient was wheeled in, having been anesthetized in an adjoining room, and I expected things to happen soon. Not so, however, although there were five doctors and three nurses all scrubbed up ready to go, besides about eight other helpers of various sorts. The patient was kept under light anesthesia and everybody stood by to wait fifteen minutes for the big chief to arrive. Finally he appeared and, after scrubbing up, he started in. Although he was the man with his hands in the belly, he operated without gloves and without a cap. In the next hour and thirty-five minutes, he did six majors, four of which he completed himself up to the point of putting on the dressings. Three of these were thoracoplasties under local. The local was given before the patient was brought in and no further anesthesia was given during the operation. The intercostals were blocked along the spine and in one operation I saw him remove pieces of six ribs, the total time elapsing from the initial cut to the last stitch being exactly ten minutes. I am a thorough believer in such a local anesthesia, so perfect as to permit of rapid operative work. I have seen nothing, however, to convince me that ethy-

lene gas is not preferable to bungled local anesthesia which drags the operation out over two or three hours. We also had a chance to see the extra-pleural pneumolysis in Sauerbruck's hands, using paraffine wax. There was a large apical cavity with an otherwise quite good lung. Pneumothorax had failed. By a long incision, he laid bare the ribs over the cavity behind and took out small pieces of two ribs. With his fingers he stripped the pleura free from the ribs, enlarging the pocket sufficiently to collapse the underlying cavity in the lung. In the meantime, the melted paraffine had been brought in and poured into a porcelain bowl. As it cooled slightly and adhered to the sides of the bowl, it was poured into a similar receptacle and the nurse scraped the adherent mobile paraffine loose with a spoon and made it into a soft ball. This was handed to the surgeon, who placed it in the pocket prepared. Nurst number two, with the other bowl, was repeating the process, and so the paraffine was accumulated to fill the pocket. Great care was taken not to overfill the pocket and leave the paraffine under pressure, which would undoubtedly lead to its extrusion later. The wound was closed without drainage.

The accepted succession of events leading up to extra-pleural thoracoplasty is the following: Given a patient with severe tuberculosis involving chiefly, if not wholly, one lung; rest in bed with postural rest, shot bag on the affected side, etc., may be effectual. However, with cavitation it is usually necessary to do something further. Artificial pneumothorax should be tried. Failing in attaining a satisfactory collapse on account of adhesions, phrenicotomy on the affected side should be done, followed by the thoracoplasty, if necessary, after a period of weeks. In this short resumé of several widely different subjects, I am not going to deal with this work very extensively but believe it might well be the subject of a very helpful paper at some later date.

Artificial pneumothorax was accepted everywhere and in some places they were collapsing a larger percentage of cases than is common in this country. In the Wilhelm Neuman clinic in Vienna, they use rather high pressures in the thought that, if the cavities are not collapsed, lasting good will not be accomplished.

In that particular clinic they are, apparently, more afraid of air embolus than any other complication. One case had a hemiplegia occurring while I was there, clearing up pretty well in two days. This was apparently due to an air embolus. Their technic was such that I could easily understand this complication. I watched the work of one physician at the Brompton Hospital for Diseases of the Chest, in London, who informed me that he collapsed every case he saw which had a positive sputum. If they were unilateral, he collapsed one lung and if bilateral he collapsed both and had quite a number of his bilateral cases working while under collapse. This has, of course, been done to a certain extent here in Phoenix for years. However, in Paris, some as yet unreported work is being done where both lungs are being collapsed completely. It is a rather startling idea to put both lungs under rather complete collapse but, if it is kept in mind that a person can exist lying in bed with only one-third of one lung functioning, it is not so impossible. That would leave one-sixth of each lung functioning for it is rare that we get better than five-sixths of a lung collapsed.

Statistics show us that four-fifths of all cases found with a cavity an inch or larger in diameter, will be dead in one year from the time we diagnose them. With this staggering percentage against the cavity cases, it behooves us to take some chances with them, especially if they are doing badly, as statistics show that about fifty per cent of all collapse cases are arrested, showing a great advantage gained through pneumothorax.

Mr. Tudor Edwards, in London, is doing a great deal of chest surgery. I saw him doing thoracoplasties, phrenicotomies and lung abscess cases. He has devised a drainage tube which he is using in empyema cases, which appeals to me as being good. He always takes out a piece of rib, using a vertical incision to prevent the edges of the wound becoming infected. I have the tube here. The large tube is for drainage and in the wall of this tube is a small tube, used for irrigation. The large flange is inside the chest, pulled tight against the wall. When irrigating the cavity, the end of the large tube may be raised to the approximate level of the top of the empyema cavity and thus fill without over-distending it. Between treatments, the end of the tube should be immersed in some antiseptic solution. Then, when the patient coughs, a little air is forced out of the tube and a little water is sucked up. This gradually adjusts itself so that the water is drawn up a few inches into the tube and thus exerts a constant suction. This helps to re-expand the lung and eliminate the empyema cavity. He feels that the tube had better not be left in more than a month, as results should be obtained in that time. If the lung refuses to come out on account of adhesions, then it will be nec-

essary to remove the overlying ribs and let the wall of the chest down on the lung.

Many x-rays were available showing how the lungs came out and his end results. In his selection of cases for drainage, he stresses the difference between a localized, circumscribed empyema and a pyo-thorax, where the whole thorax is filed up with pus. One should always put in a needle for diagnosis. In the true empyema, or shut-off case, there is usually a definite thick pus and the case is ripe for some form of drainage. The mediastinum is protected in this case. In the pyo-thorax, the pus is usually thin, foul smelling, often containing streptococci. The mediastinum in this case is most likely not protected and if the pleura is opened widely, mediastinal flutter will supervene, with probably the death of the patient. Continue to aspirate such a case every other day, if necessary until the thin pus changes over to thick, when, undoubtedly, the mediastinum will have sufficient support to warrant an operation.

Phrenicotomy for bronchiectasis, on the continent, is rather common and offers perhaps more than any other treatment, considering the very slight disturbance to the patient. It will usually have to be followed by a thoracoplasty, however, with more or less indifferent results.

In Austria and Germany, tuberculin is much used and I must say that as a result of my work there, I have a renewed confidence in tuberculin when properly given. Time will not permit a discussion of the logic of its use, but I only say that it is practically universally approved on the continent. England, on the other hand, is using it very little.

One of the most discussed subjects on the continent is the protective inoculation with B. C. G. or the bacillus Calmette-Guerin, as a protective measure against tuberculosis. Very briefly, I will review this work. Calmette and his co-workers have cultured a virile strain of human tubercle bacillus in ox-bile for years and, after a long series of cultures in this medium, it has become harmless for mammals and birds and does not cause tubercle formation, although it is antigenic. Under experimental conditions, B.C.G. can effectively protect young cattle and apes against natural or artificial tuberculous infection for over a year. Guinea-pigs, and other small rodents, can be protected for shorter periods. Some of these points are controversial and some experimenters claim that B. C. G. is occasionally virulent. I am giving you the work and results as claimed by Calmette. The protection of adolescents or adults is possible only in countries where tuberculous infection is rare and in tuberculin non-reactors. It is possible to prolong the immunity by re-vaccinations, preferably the buccal route. It has been found that the intestinal mucous membrane of infants in the first ten days of life is much more absorptive of bacilli, antitoxins, etc., than later, and Calmette conceived the idea of feeding the B. C. G. to infants of tuberculous mothers during this early period, when not only was the mucous membrane very permeable but also before they had become infected with virulent tubercle bacilli. These children would almost certainly become infected by their mothers anyway, but if infected with B. C. G. one must look out only for massive infection. Whereas in France the mortality of such children of tuberculous mothers is twenty-five per cent or more in the first year of life, with the children inoculated with B. C. G. it is less than two per cent. It is claimed that the method of protection is harmless and results in no febrile reaction or physiological disturbance. The duration of the immunity conferred appears to be long enough to guard young children up to the age of three years, from family contamination, if the doses are not too massive. I am not sure of the exact numbers of children so vaccinated, but was told that it was about 80,000. Only five years have elapsed since this work was begun and this is not long enough to know whether the inoculation will prove absolutely harmless or not. Shortly before I was in Vienna, Calmette came there to try to get them to adopt it on a wholesale scale, but he was resisted on the ground that not enough time had gone by to evaluate the treatment, and it was not adopted.

Certainly the principle on which Calmette has evolved his vaccination is sound. We have felt for years that the problem of tuberculosis must be attacked from the side of protection rather than cure and the medical world is watching with intense interest this work of Calmette and his associates. It may not be many years until we will be required to treat every new-born babe with B. C. G., just as now we are required to treat the eyes of our infants.

A few words might be in place regarding the rejuvenation work and operations which have been done in Europe. Vienna has taken a large part in this work, Dr. Steinack being probably the foremost investigator.

Recent work shows that the various endocrine gland preparations on the market supposed to contain ovarian and testicular substance, do not contain even a trace of active principle. I am quoting from some recent work done in Europe in which they found a trace only in one preparation, all the others containing no active principle. If this

is so, we can see how futile it is to expect results from their use. The surgeons are attacking the problem from a slightly different angle while all efforts are, in the meantime, being directed by competent men to trying to get out an active principle. The surgeons have several operations which they are using. Professor Steinack ligates the vas deferens. He takes out not over two centimeters of the vas in the scrotum on one side only. Favorable results are claimed in a small percentage of cases. Dr. Doppler has perfected a more satisfactory operation. This is phenolization of the cord. It is done only unilaterally through a three centimeter incision, the operation being in the same place as that for inguinal hernia. An eight per cent isophenol solution is used and the operator paints the vas, the artery and veins, etc., going as far into the cord sac as possible with the applicator, and also pours the phenol solution into the wound. The phenol destroys the sympathetic nerves first, the vessels become relaxed, the testes larger and warmer. Immediately, the first night, there are erotic excitations. This is mechanical and disappears in about a week and then, after about two months, real effects may be expected. There is a real rejuvenation in some cases, the results justifying the operation in a large number of patients for the sake of the few who may be helped.

Transplantation of the gonads has been used, the ovary transplant giving better results than the testis. Different animals have been used, the one with greatest effect being the monkey glands. This can never become a very common operation, as senile old men are vastly more numerous than suitable monkeys, and it will probably become a common sight to see a dozen old men chasing the same monkey to rob him of his youth. However, he cannot satisfy them all, as it takes one monkey gland to a man, so that at least ten out of the dozen will be doomed to a seat near the chimney, a doddering old age without the bright lights and the chorus girls.

Dr. Voronoff has used this transplantation on a large number of patients. The gland is cut in four pieces and two pieces are sutured with silk to the tunica communis of each testicle. It takes five or six days before the first vessels appear, and this part of the body pours out serum and tries to nourish the transplant during that time. The first effects may be marked but are transitory. The real effects may be noted in about two months. The transplants themselves are quickly absorbed and replaced by connective tissue. The effect is through the stimulation of the patient's own gonads. It is a reactivation, and good results have been noted for three years or more. Repeated transplantations cause less and less effect.

The choice of patients for any of these operations is of importance. The operations should be refused to those where the only indication is that of some sexual disorder. The erotic excitation from the gonads calls for sexual gratification. The inhibitions from the brain tend to depress the erotic. The resultant of the two is the sexual state of the person. It is easier to change the depressant side of the balance than the erotic and treatment should be along the lessening of the inhibitions rather than the stimulation of the erotic impulse. In sexual disorders, where an operation is performed, the depressant effect only mounts higher and overcomes the erotic. The operations should be reserved for those who apparently have premature senility. In those where all normal functions are aging together, we cannot expect to affect the senility.

A remedy of which we have all heard is sanocrysin, the so-called cure of three years ago. It is being used quite extensively in some parts of Europe. I observed it especially in use at the Brompton Hospital for Diseases of the Chest, in London. They are not as yet ready to give out an opinion with regard to its efficacy and the doctors using is most extensively are not agreed in the results obtained. I had an opportunity to examine many of the temperature records, etc., and am sure that, even if sanocrysin is of any help whatsoever, it is certainly not the cure which was at first claimed for it. The United States government has prohibited its importation into the United States except for certain experimental use, so it is not of much practical interest to us here in Phoenix at this time. There is great question whether we would dare or care to use it if we had it where we could get it freely. It is quite expensive, not varying much from neosalvarsan. It is given for a course of perhaps six to a dozen shots, then wait for a few weeks to two or three months and then repeat the course. They usually start with .1 gm. It must be given intravenously with the same care as that used in giving salvarsan. The dose increases rather gradually at five or six day intervals, the maximum being .75 to 1 gm.

Kidney disease as shown by albumen, casts or cells, is a contraindication to its use and kidney damage is a complication to be feared. It evidences itself as an acute nephritis. There are other complications, such as rashes, stomatitis and occasionally very high temperatures, severe vomiting and diarrhea. Sanocrysin is a metallic poison and makes all cases slightly sick.

There are many other things of interest happening in Europe in the field of medicine but time will not permit me to discuss them further. A trip to Europe may not result in any more concrete results than a similar length of time spent in America, but work under such radically different environment in the way of language, customs and people, ceases to be work and becomes an adventure which I could heartily recommend to any of you.

A CASE OF CHRONIC ASTHMA

(Case 14121, Case Records of the Massachusetts General Hospital, New Eng., Jour. of Med., May 10, 1928, p. 641.)

Case Record re-published in SOUTHWESTERN MEDICINE, for October, page 462.

Discussions by the Yavapai County Medical Society and Officers of U. S. Veterans Hospital, Whipple, Ariz., and the Staff of the Massachusetts General Hospital.

Yavapai County Medical Society and Officers of U. S. Veterans Hospital, Whipple, Ariz.

Meeting on November 27th, Group I.

DR. C. E. STARNS, Whipple, Ariz.
DR. F. B. DeWITT, Whipple, Ariz.
DR. GALE D. ALLEE, Whipple, Ariz.

Part 1.

(Dr. Starns)

The meager history afforded us in this case makes the rendering of a decision on the diagnosis a perplexing problem. The patient was admitted on the 15th and died on the 20th. His only complaint was bronchial asthma, attacks of which he had had all his life. The present attack began three weeks before admission.

We have three outstanding conditions to consider,—the anemia, the condition of the lungs, and the heart. The lung findings plus the heart findings would indicate bronchial or cardiac asthma and edema of the lungs. The lung findings and the anemia together would suggest miliary tuberculosis, mediastinal new growth and aortic aneurism.

In cardiac asthma, the ordinary cardiac dyspnea is either persistent or distinctly dependent upon exertion and is inspiratory in type or a mere air hunger. Nevertheless, typical asthmatic attacks occur in association with, and apparently as one of the results of, a weakened heart, and especially is this true in myocardial cases with unstably balanced compensation.

One of the main points in diagnosing bronchial asthma is the difficulty in expiration. The other signs and symptoms of bronchial asthma are familiar to all of us. Therefore, I need not differentiate further.

Moist rales, distant breath sounds and slight dulness at both bases, and a failing heart would suggest edema of the lungs.

In malignant tumors of the lungs, the onset may be gradual or it may be more or less acute. The common symptoms are dyspnea, cough, pain, expectoration (which may or may not be blood streaked) and even cyanosis. The difficulty in breathing is usually constant but it may be paroxysmal in character resembling a true asthmatic attack and occasionally it is severe enough to be termed orthopnea. Secondary anemia is sometimes marked in this type of case.

Aneurism of the aorta may be mistaken for true bronchial asthma provided it is so situated as not to show any external evidence. The symptoms are practically the same as any thoracic tumor. The anemia, however, is not marked unless there is oozing from the aneurismal sac.

Therefore, we believe the anemia to be secondary to conditions outside the chest.

The discussion will be continued by my colleagues.

Part 2.

(Dr. DeWitt)

There are a number of outstanding features to consider in this case. Examination of this man shows physical, clinical and laboratory findings that are referable to the respiratory, cardiovascular-renal systems and the digestive tract. The patient was, however, seventy-seven years old; due to his condition very little history was taken. He evidently has been an invalid for a number of years; we have this statement that he had bronchial asthma and that he had had asthma of the worst sort as long as he could remember. It is to be remembered that his present illness began suddenly two weeks before admission to hospital. I am reluctant to go over the chest findings again, but several things should be considered. The man was emaciated, very critically ill, coughing weakly and expectorating mucopurulent sputum. He had apical retraction, more so on the right, marked emphysema, but no consolidation made out. The rest of the examination referable to his chest has been read. We will take the history of this patient at its face value, that he did have bronchial asthma, that he had chronic bronchitis with associated emphysema and a possible cardiac insufficiency, but this group thinks that in all probability he had something else, that he had a chronic fibroid phthisis with miliary tuberculosis that began to manifest itself during his last illness. The Germans say, "At the

extremes of life, with little or no chest findings, with temperature, the cause of it not at all obvious, without signs of sepsis, look for pulmonary tuberculosis." Lord states that emphysema either of hypertrophic or vesicular type is frequently found in pulmonary tuberculosis, usually of chronic fibroid type. Emphysema of hypertrophic type is frequently seen in chronic asthma and bronchitis, with attacks of asthma extending over moderate or long periods of time. Riviere says, in a discussion of hilus tuberculosis, that many indeed present all symptoms and many of the signs of chronic bronchitis with emphysema, and often with asthmatic attacks, the possibility of tuberculosis masking in the guise of asthma or chronic bronchitis, must always be borne in mind. Tice used two classifications in bronchial asthma, the allergic and non-allergic. In the latter he notes chronic bronchitis, emphysema, enlarged bronchial glands, tuberculosis miliary, cardiorenal diseases, reflected bronchial spasms and acute bronchitis. He goes on to state that even these classifications have their limitations, but have so far answered the purpose. Tice states that the blood pressure is low in bronchial asthma, especially between attacks; emphysema is a most common complication, being in a sense a part of the asthmatic condition of bronchial asthma become chronic, may be considered as much a sequel as a complication of the disease. Chronic asthma, accordnig to Tice, is also divided into two varieties, first, one which continues on account of the fact that there is a persistent exposure to the existing cause,—this type is always accompanied by bronchial infections,—and second, the type with chronic bronchitis with associated emphysema which is essential cause not an allergic factor. Hoffman states that chronic bronchitis occurs chiefly in chronic lung conditions such as pulmonary tuberculosis, emphysema, lung tumors and pleural diseases. Lord states, that in 161 cases of bronchial asthma, which he observed in connection with its complications by other diseases, he found 19 per cent or 31 cases associated with pulmonary tuberculosis, 22 of the ulcerative type and 9 of the miliary type.

Knowing that this man was seventy-seven years old and that he had had asthma with a marked emphysema all his life, we think that in all probability he developed what was known as terminal broncho-pneumonia, and which, according to Tice, is now known as a terminating bronchial pneumonia.

Part 3.
(Dr. Allee)

The three outstanding features in the history are, an asthma which lasted well on to seventy years; the laboratory findings of a very severe anemia, with absence of hydrochloric acid and presence of blood in the stomach; and the findings of the physical examination which relate principally to arteriosclerosis. I think most doctors, if asked what a man would die of who has had asthma for seventy years, would say bronchopneumonia. Is it possible that this man did have bronchopneumonia when he became suddenly worse? Did it last three weeks and was it the final cause of death? If it was, the lung findings are rather peculiar. There is nothing recorded except some squeaky noises. We would expect in three weeks time that a fatal bnonchopneumonia would have produced patches of consolidation. I do not think it possible that his growing suddenly worse three weeks before death was due to bronchopneumonia. If we search further in the lungs for the cause of death we would question whether this man's statement that he had had asthma all that time was correct. Was it bronchiectasis? If it was bronchiectasis, was it accompanied by, or did it terminate in, abscess of the brain? There is no evidence recorded that would justify such a diagnosis; there were no headaches, no vomiting, no vertigo. The question of a terminal tuberculosis would be a very likely proposition to consider. Did this man have an old fibroid tuberculosis that suddenly flared up and went over him like wildfire? I think not, because if it did, it would have had to be a miliary tuberculosis in the lung, and we find that his respirations were only 28 to 32 which is not very rapid for that form of tuberculosis. More than that, we find that while there was some dyspnea there was no cyanosis, and miliary tuberculosis of the lung in this case should have caused very marked cyanosis. We should also have had a positive sputum. With a patient expectorating freely as this man did, that would have clinched the diagnosis. Inasmuch as we do not have a positive sputum, I think we may dismiss tuberculosis. Also tuberculosis should never have given him that tremendous anemia that is recorded.

Physical examination showed an enlarged heart and every evidence of a weak heart, which no doubt was dilated; there was some edema of the ankles, very low blood pressure, about which is a remarkable thing in that the diatolic ran down to 0, a phenomenon which would probably occur with arteriosclerosis, not a very significant thing

but merely showing a weak heart with arteriosclerosis.

It is recorded that the present attack of asthma began suddenly three weeks before admission,—we interpret that attack as bronchial asthma, and to account for his growing suddenly worse after having had asthma for seventy years, we wonder if there was some sort of pressure in the chest. Could there have been a mediastinal growth or arteriosclerotic or syphilitic aneurism? We have no x-ray findings, nothing by which we could diagnose such a condition. It is possible, but it does not sound very likely, that the cause could have been in the kidneys. The non-protein nitrogen excretion is diminished but that is not positive evidence of any organic trouble in the kidneys themselves. It is a thing to be expected when you read that he had only a million to a million and a half red cells; there was simply not enough blood going through the kidneys for them to function normally.

Another thing that would explain this man's death is septicemia. That can cause a very severe anemia. A man of this age, arteriosclerotic as he was, would require only a very slight infection to carry him off, but there could not have been an infection about the body that could cause such a tremendous secondary anemia, without giving such definite symptoms that we would have some idea of the location. The only hint of such a location is slight tenderness and some rigidity of the muscles in the right upper quadrant, which is not sufficient proof of an infected gall bladder or other organ in that region.

We have two laboratory reports, one on the blood and the other on the stomach contents. The blood count of from one to one and a half million red cells could be only one of two things,—prenicious anemia or a very severe secondary anemia. In favor of pernicious anemia would be the fact that there is no achromia, with the hemoglobin 40 or 45 and with only so few reds to produce that percentage, which is a relatively high hemoglobin. And there is also the polychromatophilia. Against it are a good many things, the leukocytes, normal in number, the blood platelets normal, polys normal in number, and there are no giant cells, no nucleated red blood corpuscles. I don't like to pass up pernicious anemia when there is no achromia, as I have noticed in Dr. Cabot's discussion that this is one of his great points of distinction between secondary and pernicious anemia. In favor of secondary anemia we have the fact that the leukocytes and blood platelets were practically normal in number, the reds generally,—and another very significant thing is the normal polys. Against a secondary anemia is only the absence of achromia.

Our group has concluded that the anemia is secondary, and we are now confronted with the necessity of finding a cause for it. Secondary anemia is caused, of course, by all sorts of acute diseases, the presence of which no intimation is given here. Hemorrhage is a frequent cause. If this man had had severe occult hemorrhages it would explain the blood picture;—if he had, for example, cancer of the rectum, which could be very silent and cause practically no symptoms, and which could have been constantly bleeding without his knowledge. In fact, if he had constant loss of blood from any cause or source, that would explain very nicely the blood findings which are reported by the laboratory examinations.

Mineral and other poisoning could also give this blood picture, but there is no evidence that he had been subjected to any poisoning.

We are left with the only other possible cause and that is malignancy. The laboratory found in the fasting stomach 170 c.c. of guiac positive brownish fluid with some precipitate, no undigested food and no free hydrochloric acid. A test meal corroborated this guiac positive finding with contents 25 c.c. and no hydrochloric acid. This indicates rather rapid emptying and is a finding compatible with severe anemia.

We have nothing in the history to assist in differentiating pernicious anemia from carcinoma of the stomach. We do not know anything of his past history, whether he had any gastro-intestinal symptoms, such as vomiting, etc., nor whether there was any periodicity in this blood picture. The findings are very slight upon which to diagnose gastric cancer. If we had some knowledge as to whether the stools contained blood it would be very much more significant and a more reliable basis than this stomach content report upon which to diagnose some probable neoplastic growth in the intestinal tract. But as little evidence as we have, our group has decided to call it carcinoma of the stomach and we give that as the primary cause of this man's death. In addition we think that autopsy will show that he has a general arteriosclerosis, a dilated arteriosclerotic heart, pulmonary fibrosis and emphysema.

Staff of Massachusetts General Hospital

New Eng. Med. Jour., May 10, 1928, p. 641.

RICHARD C. CABOT, M. D.

With the explanation as given I think the probable right reading of this blood pressure would be 90/40.

The hemoglobin reading would tend to make us

think there was no achromia. They are asking themselves the question as to whether this is pernicious anemia or not, and trying to get light on that question from the details of the blood. Most of the facts on the blood so far are against it. In pernicious anemia ordinarily we do see plenty of young forms. "Reticulated cells 0.3 per cent." is low. It backs up what I said about the young forms. The reticulated is a young form, and with an active marrow ordinarily would be in much higher per cent than that. There is a high figure after transfusion. Red cell diameter measurement is quite a difficult, long job to do. Since they have done it they have said the most important single thing there is to say in favor of pernicious anemia. The central fact about pernicious anemia is big, well colored cells. One ordinarily guesses at the size; but here they actually measured it.

DR. TRACY B. MALLORY: Does that prove that their original guesses were wrong

DR. CABOT: Yes, I should say so.

The non-protein nitrogen is distinctly high, though not tremendously high.

The temperature most of the time is 100° or higher. The striking thing about the pulse is its gradual improvement so far as we can tell from the rate. So this is a febrile case with a pulse that looked as if it were improving.

"Too weak to get his story" makes us very likely to go wrong in our diagnosis, because correct diagnosis here, as figures show, is much more dependent on history than it is on physical examination. When we do not have a history we are much more apt to go wrong.

DIFFERENTIAL DIAGNOSIS

We have two main questions of interest, I think, as we examine the record of this case: the source (1) of his chest trouble, and (2) of his anemia. We have no x-ray, I take it, in this case. He was too sick for it. I am sorry for that, because it deprives us of the only method by which we can make a diagnosis of emphysema. I have seen the x-ray people go right several times lately when we could not make a diagnosis on physical signs. The history, so far as we have had it, is one that often ends in emphysema, a history, that is, of a very longstanding cough with asthma. The history, then, favors emphysema, the physical signs are neutral, and we have not got the x-ray.

When he came in he probably had a bronchitis which with the ascent of the leukocytes was at the end pneumonia.

We have no evidence of disease of the heart. If he had an emphysema for many years it is quite likely that his heart at the end would be hypertrophied. But physical signs give no evidence of that.

Aside from those signs in the lungs and heart we are concerned with the cause of his anemia. Anemia is what he died of, I think, aside from the terminal infection that he may have had. What was the cause of his anemia? We do not know as much as we should like about his kidneys. Could this be an anemia secondary to chronic nephritis? I think it could be. But it is much more extreme than is present in the majority of cases of chronic nephritis, which show a distinct but only moderate degree, about 3,000,000 ordinarily. But cases are on record with as bad a record as this from chronic nephritis. The urine is consistent with chronic nephritis, but not conclusive. That is, we do not know whether the gravity is fixed, we do not know about the phthalein output, we have but one measurement of non-protein nitrogen, which is high but not distinctively high. So I am in doubt about the kidney. Almost anybody at his age would have arteriosclreosis in the kidney, but whether it is enough to call nephritis I cannot say.

Then they were wondering about cancer of the stomach. In any obscure anemia we ought to say to ourselves "This may be cancer of the stomach" whether he has any stomach symptoms or not. They followed that up as well as they could. They demonstrated the presence of achylia, but they did not have an x-ray, which at the present time I think is essential for any reliable diagnosis of cancer of the stomach. I should say that since he has had so little in the way of stomach symptoms and since he has an anemia which in itself would be enough to abolish hydrochloric acid, we had better not suppose cancer.

I do not see that we have anything else in particular to guide us as to the cause of his anemia. We have speculated about the only two things—his kidney and his stomach—which we have any evidence about. It might of course be some type of bone marrow neoplasm. We have no evidence about that and could not have except through metastases or through certain characteristics of the blood which were not present here.

Intestinal parasites one generally mentions for completeness. We have no evidence about his feces, but if he lived here it is almost impossible that he should have died of anemia caused by intestinal parasites.

Poisons like benzol may give an anemia, but at his age and in the absence of known exposure I do not see any reason to consider that.

Can this be pernicious anemia? Yes, so far as I see it can. I cannot rule it out. I have mentioned the things chiefly against it,—the absence of an effort at regeneration, as shown by the presence of various kinds of young cells such as stippled and polychromatophilic, nucleated red, and these cells with a reticulum. We have no evidence of those. We have no evidence, in other words, that his marrow was making an effort to regenerate. On the other hand, we have conclusive evidence of enlargement of the red cells, which is rare in any form of anemia except pernicious anemia. He is rather old for pernicious anemia. The majority of cases occur in somewhat younger persons. He shows no evidence of having had a previous wave of anemia with recovery from it, which if we had had a good history might have come out. We almost never in this hospital see cases in their first "down-wave" of anemia. Here, with no history, we cannot sof ar as I see say anything about it.

Can anything above the diaphragm, in his heart or lungs, account for this anemia? No, I do not see how it can. Of course sepsis is a cause of anemia. One asks whether there might be sepsis in the lung: bronchiectasis or abscess. But it would be strange if we did not get more signs, by sputum or by history, of any such thing. I do not believe, then, that the cause of his anemia is above the diaphragm.

I feel uncertain as to the cause. But I think more points favor pernicious anemia than anything else. It is rather more like that, and rather less like anything else that I can name. It might perfectly well be secondary to chronic nephritis, as I have said, if there is chronic nephritis. I have to end with three uncertainties: (1) Possible emphysema with terminal pneumonia. (2) Possible chronic nephritis in addition to that, with a secondary anemia. (3) Possibly pernicious anemia.

A PHYSICIAN: Wasn't the white count rather high?

DR. CABOT: Yes, it was. I think I should have put more stress on it. That is another point against pernicious anemia. Pernicious anemia has a normal or diminished—usually diminished—white count, and a diminished polynuclear count.

A PHYSICIAN: Is it possible that in a man of

seventy-seven his bone-marrow would be in such a state that it could not throw out young cells?

DR. CABOT: You mean that he had pernicious anemia and his marrow could not act as most people's does? I do not know enough of the bone marrow of old age to answer that. So far as I know there is nothing known of the atrophy of bone marrow in old age.

DR. MALLORY: I don't think there is any definite process.

A PHYSICIAN: He has had two positive guaiacs from the stomach contents.

DR. CABOT: I do not think that is of much importance. We cannot avoid traumatism in the stomach in the way we abstract the contents. In relation to the only thing we have to think of, cancer, it seems to me it is very feeble support. We get here a great many positive guaiacs in the stomach and in the stools that we never account for.

MISS PAINTER: That leukocyte count was not taken until just before he died.

DR. CABOT: Yes, the 34,000 came just before he died, but the six to nine thousand is high for pernicious anemia.

DR. MALLORY: Wasn't he put on liver diet?

MISS PAINTER: Yes, on December 17.

DR. CABOT: He died on the 20th, so he had three days of liver diet.

DR. MALLORY: I think the reticulated count was subsequent to the liver.

DR. CABOT: But they also transfused him, so we cannot say whether the liver or the transfusion did it.

A PHYSICIAN: What would you say about the icteric index?

DR. CABOT: That is not at all queer for pernicious anemia. It is a great deal queerer for secondary anemia. I should think that would pretty well balance the other point against pernicious.

A PHYSICIAN: Would it be increased in metastatic cancer of the liver?

DR. CABOT: Yes. That, of course, could perfectly well have increased the icteric index, but we ought to have got some evidence of that before death.

It is borne in upon me more and more in these exercises that one ought always to think of cancer of the prostate on general principles in cases in which we have not had an x-ray of the bones and in which there is nothing else to go upon. Prostatic cancer in many cases—not all—gives some palpable evidence. He did not have palpable evidence. If that is not present we can recognize cancer of the prostate only by x-ray of the bones, the characteristic metastases.

Another lesion that is always a good thing to think of is hypernephroma, which also can be entirely silent. But, as I said about cancer of the prostate, we have neither local nor metastatic symptoms of that, and if we do not have local or metastatic symptoms, then the thing may still exist, but we cannot diagnose it.

CLINICAL DIAGNOSIS (from Hospital Record)

Pulmonary edema.
Bronchopneumonia.
Pernicious anemia.
Arteriosclerosis.
Chronic nephritis?

DR. RICHARD C. CABOT'S DIABNOSIS

Possible emphysema with terminal pneumonia, or
Possible chronic nephritis in addition to that, with a secondary anemia, or
Possibly pernicious anemia.

ANATOMIC DIAGNOSES

1. **Primary fatal lesion.**
   Pernicious anemia.
2. **Secondary or terminal lesions.**
   Bronchopneumonia.
   Arteriosclerosis.
3. **Historical landmarks.**
   Benign hypertrophy of the prostate.

DR. TRACY B. MALLORY: I do not think it is often possible to make an absolutely positive diagnosis of pernicious anemia at the post-mortem table. But certainly the findings in this case are very characteristic and I do not think there is much doubt that this is the disease from which he died.

Post-mortem examination ruled out most of the other things under discussion. No malignancy was found. It is interesting that the prostate was extremely big. He had a very much hypertrophied bladder with coarse muscular trabeculation and a few small diverticula, yet had never complained of urinary symptoms. It is rather striking how often this is the case. I remember one man whose necropsy I saw who died from a perforation of the bladder as a result of prostatic obstruction, but walked around for six hours after his bladder had perforated and never complained of any symptoms up to the moment of perforation.

The lungs did not show any marked degree of emphysema, and the right heart was not hypertrophied. There was, however, a diffuse terminal bronchopneumonia. There was quite marked arteriosclerosis, chiefly in the aorta and the larger cranial vessels.

The kidneys were of normal size and showed a very slight degree of arteriosclerosis. The bone marrow of the femur was bright red in color. There was hyperplasia of the marrow in the ribs, sternum, and vertebrae. Microscopic examination showed an extreme degree of hyperplasia. A considerable portion of the cells present were fairly mature blood cells, well developed normoblasts, for instance. The only bone marrow that I can feel certain is always due to pernicious anemia is the type found in the extreme relapses of the disease, which is composed almost exclusively of very early cells of the megaloblast type. Many of these were present here, but also many of the relatively mature cells. I think that the favorable reaction from his transfusion and the liver diet would perhaps account for the more mature cells in this case. The sections from the liver and spleen show very large amounts of hemosiderin, which is very characteristic of pernicious anemia though by no means pathognomonic.

DR. CABOT: I think it is worth while summing up some of the lessons we can learn from this case.

(1) That we can have a pernicious anemia with as high a white count as this in as old a man and with as little history so far as obtained.

(2) That we can get as much non-protein nitrogen with kidneys not importantly diseased.

(3) That we can get all the physical signs here described as to the chest without emphysema.

One of the points Dr. Mallory doubtless had in mind in settling on the diagnosis of pernicious anemia was not only that the bone marrow was fairly typical, but that there was no other cause for anemia in the body. One cannot have any other kind of anemia and die of it without a cause. He had a good chance to look for a cause and there was not any. When a person dies of anemia with no cause we are pretty much bound to call it pernicious even if we do not find the marrow quite right.

FATAL CHOREA

(Case 14171, Case Records of the Massachusetts General Hospital, New Eng. Med. Jour., June 14, 1928, p. 914.)

Case Record republished in SOUTHWESTERN MEDICINE, for October, page 462.

Discussions by the Yavapai County Medical Society and Officers of U. S. Veterans' Hospital, Whipple, Ariz., and the Staff of the Massachusetts General Hospital.

Yavapai County Medical Society and Officers of U. S. Veterans' Hospital, Whipple, Ariz.

Meeting of November 27th, Group II.

DR. IRL THOMAS, Whipple, Ariz.
DR. ROBERT S. FLINN, Prescott, Ariz.
DR. JOHN W. FLINN, Prescott, Ariz.

Part I. (Dr. Thomas)

We have a rather clear cut case in this young girl who first developed tonsillitis, streptococcus sore throat, and later rheumatism involving wrists, ankles and hips. It seems she did not do very well following the rheumatism and shortly afterwards developed symptoms of chorea, twitching of the muscles of the neck. Two or three days later she had to quit school. In a short time she became rather violent. Looking up the history of all these cases, this seems to be the syndrome,—rheumatism, endocarditis and chorea; rheumatism appearing first, then endocarditis, and lastly choreic symptoms become manifest. I read an article the other night which stated that in cases of chorea anywhere from 25 to 50 per cent give a history of rheumatic fever, and in the cases of rheumatic fever that do not show some cardiac complication there is usually a mistaken diagnosis.

My colleagues will further discuss the case.

Part 2. (Dr. Robert S. Flinn)

According to Osler most cases of chorea are usually recognized at the first glance. After several glances it still appears to me that this case is one of chorea. Chorea is an ancient disease, having appeared in epidemic form in the middle ages. Saint Vitus Dance derives its name from the procession of dancing patients in the Strassbourg epidemic who proceeded in this manner to the chapel of Saint Vitus for treatment. Sydenham in 1686 wrote a classical description of this affection, hence the name "Sydenham's Chorea." It is characterized by irregular, involuntary movements and is accompanied by emotional and mental disturbances of the same irregular nature. It may vary in intensity from the very mild form in which only one hand may be affected, to the most severe type, the so-called "Chorea Insaniens." Chorea may be regarded as a manifestation of the acute rheumatic cardio-arthritic group in which, following an acute throat infection, there appears rheumatic involvement of the joints, endocarditis, varying degrees of pericarditis, and, in most instances, chorea. Rheumatic fever is not the only cause of chorea, for it has certainly followed tuberculous meningitis, scarlet fever and congenital syphilis. In this case we need consider only that of meningitis, and the absence of signs together with the negative spinal fluid rules that out.

Considering the points in favor of acute rheumatic endocarditis: five weeks before admission to the hospital the patient developed sore throat; two weeks later joint involvements appeared The invo.vement of so many large joints leads us to believe it to have been one of rheumatic fever than one of the acute arthritides. The patient falls rather prettily into the age and sex group.

Is there an endocarditis? On the basis of the history, symptoms of chorea and the rough high-pitched systolic murmur developing during the course of the disease, we may safely say yes.

There appears to have been a septicemia, the parotitis being a terminal manifestation of a generalized infection. It also appears that exhaustion played a very important part in contributing to the patient's death. The spinal tap was evidently a therapeutic measure for the symptoms do not suggest meningitis.

Some other conditions might cause these nervous movements, such as Friedreich's ataxia, which is readily distinguished by the slow incoordinate movements, the scanning speech, the nystgamus and the familiar character of the affection; poliomyelitis is sometimes confused with chorea, but the occurrence of muscular wasting readily makes the diagnosis clear. Huntington's chorea occurs at a later period of life and there is a family history of the disease. Habit spasm and hysteria are sometimes confused with the mild form of chorea, but in this case the movements were of such a violent nature that these conditions need not be considered.

Our group feels justified in ruling out every other cause for the chorea except rheumatic fever, establishing rheumatic fever on the basis of the sore throat and multiple arthritis, and the developments of the case indicate an acute endocarditis, with a possible terminal septicemia.

Part 3. (Dr. John W. Flinn)

Forty years ago this patient would have been considered to have a combination or complication of four separate and distinct diseases; sore throat, rheumatism, St. Vitus dance and acute heart disease. Long before that, however, (in fact as far back as the

time of Bright) the more observant members of the profession had begun to call attention occasionally to the casual relationship between sore throat and endocarditis, also between sore throat and chorea, and especially between chorea and rheumatism. It was not, however, until the early nineties, when Osler clarified and emphasized this relationship, that the rank and file of the medical profession first began to recognize the possibility of a common cause for these four diseases. It is interesting to note that Osler in his earlier years, his predecessors and confreres, based their idea of this relationship solely on clinical observation. In the intervening years pathologists have done a very great deal of work on the bacteriology of these four diseases, and it will be interesting to observe just exactly what the laboratory men have been able to prove definitely regarding this relationship, which was suspected by the earlier members of the profession.

Tonsillitis. The tonsils are so situated that it is possible to learn considerable about their pathology by biopsy or after removal. It seems to have been distinctly proven that the tonsils and peritonsillar tissues are particularly susceptible to infection by ordinary pus organisms and especially by the streptococcus. Any physician who has seen a severe case of tonsillitis and has watched the generalized symptoms, must have been impressed by the tremendous amount of toxemia that is produced by these organisms. As again, those who have seen a few cases of tuberculous ulcer of the tonsils must have been impressed by the rapidity with which these ulcers spread.

Acute rheumatic fever. Forty years ago physicians spoke of cold, change of weather and what not, as being the provocative cause of rheumatism. It was not until 1890 to 1905 that the attention of the profession began to turn to the work of Poynton and Payne. They apparently demonstrated a peculiar streptococcus, which they were fortunate enough to recover from the blood and exudates of patients with rheumatic fever. This, the older members here will recall, was referred to as the "streptococcus rheumaticus." Then in 1912, Rosenow reported that he was able to grow a peculiar form of non-hemolytic streptococcus which he could isolate from the blood and exudates of most cases of rheumatic fever. At that time a large number of the profession were greatly impressed by Rosenow's work and I think some of us came to the conclusion that the question of the bacteriology of rheumatic fever had been settled. Further work seems to have raised considerable doubt in regard to this, and all that those in a position to speak authoritatively care to say today is, that any form of non-hemolytic streptococcus, or streptococcus viridans, will apparently cause rheumatic fever in animals. Whether or not that is the only cause of rheumatic fever, no one in authority seems justified in saying. Apparently no form of streptococcus or any other organism has so far been isolated which will fulfill all the requirements of Koch's postulates.

Chorea. Poynton, I think the same man who was associated with Payne in the study of rheumatism, says, "The chief cause of chorea is rheumatism." I take it he bases this statement on clinical experience. Pathologically he looks on chorea as a mild meningo-encephalitis, that is, of course, inflammation of the brain and its covering membranes. He has done a fairly large amount of experimental work on the bacteriology of chorea and is inclined to look on its minute pathology as similar to that of rheumatic nodules under the skin. His work, which is not extensive, seems to bear out his theory in regard to the minute pathology of this disease. He has found bacteriologically or microscopically, that the nodules under the skin and the lesions in the brain and its membranes both show vascular exudation, edematous swelling of the connective tissue, leucocytic exudation and a central microscopic area of necrosis, the result of local infection. It is only fair to say that his work, and, so far as I have been able to determine, the work of any other investigator, has not been sufficient to justify anyone in claiming that the last word has been said regarding the pathology of chorea. What has been done is more suggestive than in the nature of definite proof.

Acute endocarditis. Homer Swift, who seems to be the authority on this question, says that the etiology of the endocardial lesion is probably the same as that of the focal manifestations of rheumatism elsewhere. He states that the streptococcus viridans or the non-hemolytic streptococcus, is looked upon by a large number of investigators as the causative agent of both rheumatism and endocarditis, but does not consider the matter proved at all. He says there are many arguments on the other side of the question.

This seems to be a fair resume of the work that has been done, (a tremendous amount of it), in the last twenty years on the microscopic pathology of these four diseases. It has apparently been definitely proven that tonsillitis is the result of an infection, very often by the streptococcus. There is at least a strong suggestion that the non-hemolytic streptococcus is the causative agent of the other three symp-

toms-complex, but the proof is not at all conclusive. Incidentally, we find here, what we generally find regarding the work of the laboratory man; all that he has been able to do in these four diseases is to offer rather inconclusive corroborative findings to the clinician. He has been able to corroborate to a certain extent the observations that the clinical man has been making for a number of years.

Now to return to this specific case, what have we? We have a school girl sixteen years of age, who on the sixth day of February developed a streptococcus sore throat. It is rather interesting to note that just exactly two weeks later she developed rheumatism, and in just exactly another two weeks she developed chorea; almost exactly two weeks later she developed symptoms of endocarditis and promptly died. Now it seems to us most reasonable to attribute all four diseases to a common cause, probably the streptococcus. We know that there has been a streptococcus infection in the tonsils. We are also convinced from clinical findings running over a great many years, and from a certain amount of laboratory evidence, that the streptococcus very probably can cause chorea, that it very probably can cause rheumatism and that it very probably can cause endocarditis. We think it is rather reasonable to suppose that the one infection caused these four symptoms-complex. We can not see any strong argument in favor of claiming that there was a second form of infeciton in this case. So the conception of Group II, of this case, is that this little girl developed a streptococcus infecfection of the throat, in two weeks the infection had spread to the joints, in another two weeks it had spread to the brain and meninges, and in another two weeks it had spread to the endocardium. We hesitate whether or not to use the word "septicemia." The diagnosis of septicemia, I take it, is justified only when the microorganism is definitely found in the blood stream. Examination in this case was negative. The laboratory men tell me that a negative examination is very inconclusive, that the finding of the microorganism in the blood is extremely difficult and is only possible in a very small percentage of cases. In spite of the fact that the blood was negative, we might use the word septicemia in this case, but after all the naming of it is simply a splitting of haris. For the sake of comparison let me remind you that in cases of kidney, blood vessel and heart disease some one has coined the expression cardio-vascular renal disease. Twenty or thirty years ago they were spoken of as heart disease, blood vessel disease and kidney disease. If you wish to choose your words very carefully perhaps we had better say in this case "septic neuro-cardio-arthritis." Call it what you will. There is a generalized infection, probably streptococcus, beginning in the throat, spreading to the joints, afterwards to the brain and meninges and finally to the endocardium.

Staff of Massachusetts General Hospital

(New Eng. Med. Jour., June 14, 1928, p. 914.)

RICHARD C. CABOT, M. D.

I remember this patient well. She was in my service seventeen years ago. Of course the diagnosis is perfectly obvious—chorea—and it is very tragic when we see a case as terrible as this. When one has been fishing and gets a fish it flaps around in the bottom of the boat. She flapped around like that, and only tremendous doses of drugs had any effect. She was terribly violent.

Of course we were watching the heart, knowing there must be something there in such a case as this, as there practically always is. For five days we undoubtedly were looking as often as we could under the difficulties that one can imagine in examining a patient who was in such motion.

I do not know why we did that lumbar puncture. I do not see today any sufficient reason for it. The case does not resemble meningitis or any other cerebral disease that could involve the meninges. Part of the fluid was bloody, undoubtedly because we got some blood mixed in with the tap. We got no information. We had a sediment showing the blood introduced during the tap and no evidence of a meningitis. The negative culture was of some value.

We do not always relaize the fevers of acute chorea, although in this case, if I remember rightly, there were some other reasons besides the chorea.

Remembering the case as clearly as I do during life, I do not think any diagnosis was or should have been seriously considered except the so-called chorea major, the severest form of chorea. We have had three fatal cases of this disease in this hospital to my knowledge during thirty years. Two of them, as I remember, showed at necropsy something more besides the chorea. Whether this is one of them I cannot remember.

In chorea the lesions in the heart at necropsy are almost constant, and they are usually of fairly uniform type,—little spots of soft reddish material as big as the end of a pin, arranged in rows along the edge of a valve, usually the mitral; never, so far as I know, large vegetations, and never any chronic or ulcerative process unless there has been something more besides chorea. That is, that endocarditis, as I remember it, seems to me different from the average endocarditis of rheumatic heart disesae or of bacterial endocarditis.

Two earlier English observers, Poynton and Paine, who wrote a good deal on rheumatic infections, described brain changes in chorea. So far as I know those have not been backed up by later observations. I do not believe there were any found here. There must be changes in the brain, and why we do not find them I do not know. The symptoms are all brain symptoms. This is strikingly evident in hemichorea, one half of the body perfectly quiet and the other half, including the face, twitching. That could not be anything but a brain lesion.

Another point not always referred to is the mental changes in chorea, which get covered up because we suppose that the patient's queer sounds and queer remarks are due to the mechanical dis-

turbance of speech. But there are also definite mental changes, as one would expect in a brain disease such as chorea certainly is.

What is the relation of chorea to acute articular rheumatism? I am confident that they are the same disease with different manifestations. Just as we can have tuberculosis either in the joints or in the meninges, so we can have the organism of rheumatism, never yet discovered, either in the joints or the brain of such patients as we are studying today. On gets every possible sequence and combination of rheumatism and chorea: one sees first rheumatism and then chorea, one sees first chorea and then rheumatism, one sees the two at once.

The hyperpyrexia here is of some interest. The hyperpyrexia of rheumatism is referred to in all the classical accounts of acute articular rheumatism. Here it followed a lumbar puncture which may have had something to do with producing it. But my guess is that the lumbar puncture did not produce it. I believe that the asepsis even at that period was tolerably good. It is not so easy to introduce sepsis into the cord or it would happen oftener. So that I doubt whether anything will be found in the cord, if it was examined, to account for that temperature of 108°. I guess it is a hyperpyrexia of chorea parallel to the hyperpyrexia of acute rheumatism.

I do not know anything about the finding of the Aschoff bodies. Do you find those in chorea, Dr. Mallory?

DR. TRACY B. MALLORY: I think we probably find them in the heart. I do not know of any reports of them in the brain.

DR. CABOT: If they do occur in the heart there is no reason why we should not find them here. I should say the post-mortem ought to show small vegetations on the mitral valve, possibly on other valves, and nothing else that we can predict.

A PHYSICIAN: Is there any significance in the parotitis?

DR. CABOT: I do not know how to say anything about that. I do not remember it in chorea cases before. But any patient who is gravely sick is apt to develop a parotitis owing to the spread of mouth organisms up Steno's duct. As we do not know the origin of parotitis we shall not be able to find out whether this is a choreic parotitis or some other kind, I suppose.

CLINICAL DIAGNOSIS (From Hospital Record)

Chorea major.
Acute endocarditis.
Exhaustion.

DR. RICHARD C. CABOT'S DIAGNOSIS

Chorea major.
Acute endocarditis.
Parotitis.

ANATOMIC DIAGNOSES

1. **Primary fatal lesions.**
(Acute chorea.)
Verrucose endocarditis of the aortic and mitral valves.
2. **Secondary or terminal lesions.**
Hemorrhagic areas of the lungs.
Slight bronchopneumonia.
Fatty metamorphosis of the liver.
Slight cystitis.
Parotitis.

DR. MALLORY: The necropsy findings were not extensive, as the head and cord were not examined. The heart showed, as predicted, minute vegetations on the mitral and also a few on the aortic valve. There was no deformity of any of the valves. The lungs showed a very slight acute bronchopneumonia, and also numerous petechial hemorrhages that could not be attributed to a pneumonic process. The kidneys showed a slight degree of tubular degeneration but no glomerulonephritis.

Bacterial cultures were made of heart's blood, both aerobic and anaerobic, and no organisms were grown.

DR. CABOT: Was the brain examined?

DR. MALLORY: No.

It is interesting to hear Dr. Cabot mention again Poynton and Paine, because the present trend of work on rheumatic fever seems to be swinging back decidedly towards the point of view of some of the early workers. There seems to be no question that in a very considerable proportion of cases of rheumatic fever it is possible during life or post mortem to grow a streptococcus from the blood stream. The figures from various laboratories differ a great deal, but there are a number of laboratories in which fifty per cent of cases of severe rheumatic fever seem to show this organism. We are still quite a way from providing that that is the cause of rheumatic fever, but some of the recent work is at least suggestive, particularly that of Small of Philadelphia and Birkhaug of Rochester. They have grown streptococci which produce neither hemolysis nor methemoglobin. Birkhaug has shown that this organism produces a relatively mild exotoxin of about one-fourth the strength of scarlet fever or erysipelas, and that patients with rheumatic histories tend to react with positive skin tests to this toxin, whereas normal controls are generally negative. He found that he himself was a susceptible individual as measured by the skin test, and injected a small quantity of this toxin into one of his joints, thereby producing clinically a very typical attack of acute rheumatism, not only that joint but several other joints swelling, becoming red and very painful, with fever, the condition lasting about four days. Injection of the organism in rabbits produces mitral endocarditis, but only when huge quantities are given. So far the work stands about there, but it does seem possible that we may come back to some of the opinions held by the earlier investigators.

DR. CABOT. I am very glad to hear your opinion of that work of Dr. Small's. I had rather thought that most of the laboratories were not backing that up.

DR. MALLORY: I am inclined to pin more faith on the others. Birkhaug's work was more carefully controlled and his claims are less sweeping. The organisms have been worked with here in Boston and also a similar organism isolated by Clawson and Bell of Minneapolis. All three of these organisms are apparently serologically closely related. One can also, it is true, recover it from the throats of a very large number of normal persons.

DR. CABOT: But that is nothing against it, do you think?

DR. MALLORY: Not at all.

GRAHAM COUNTY MEDICAL SOCIETY (Arizona)

On January 2nd, the Graham County Medical Society met at luncheon in the cafe at Safford, with Dr. Mary L. Neff, of Los Angeles, as guest. Following the luncheon, there was an informal discussion of interesting clinical cases. There were present, besides Dr. Neff, Drs. J. W. Morris, R. C. Dryden, J. N. Stratton, H. W. Squibb, and Wm. E. Platt.

THE ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LISCENSURE AND HOSPITALS, under the auspices of the Council on Medical Education and Hospitals, will be held in Chicago on February 18, 19 and 20, at the Palmer House. Members of the medical profession are being invited to a very interesting and instructive program.

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VOLUME XIII.

We begin our thirteenth year of publication with a reasonable degree of satisfaction. There are many things that we would prefer to have better, but there is also a fair measure of accomplishment behind us. This journal ranks high among the smaller medical journals of the country. The material presented in its pages reflects the excellence of the medical practice in the southwest. With the continued cooperation of the county medical societies and the constituent associations, this journal will continue to grow in influence and quality.

"UNHEALTHY" HEALTH LEAGUE'S INITIATED MEASURE DEFEATED

The medical profession of Arizona should feel gratified with the overwhelming defeat of the attack on the public health of Arizona by the self-styled American Medical Liberty League. Disguised as a law to "permit a person to choose his own doctor" it was unmasked by the editorial comment of well informed newspapers of Arizona and by news items which told of its true import.

The various medical organizations in Arizona undertook to inform their several communities regarding the true meaning of this measure. The best work was done by the Cochise Medical Society. The members of this society enlisted the aid of lay men and women to distribute some ten thousand brief analyses of the true meaning of this proposed law. Every voter in the county received such an analysis, either handed to him by another voter or sent to him through the mail.

In Pima County, the doctors sent out twelve thousand of these through the mails to their patients.

In Yuma County, Graham County and Mohave County, the voting poll lists were used and every voter received such an analysis.

Through such concerted effort, the amendment was defeated by about fifteen thousand majority.

To those newspapers intelligent enough to see the Senegambian in the woodpile of this pernicious proposal and interested enough to expose him, we offer congratulations, and, as citizens of Arizona, thanks.

MEETING OF SECRETARIES AND EDITORS IN CHICAGO

In November of each year, there is held in Chicago at the headquarters of the American Medical Association, a rather informal gathering of about fifty men,—with an occasional woman. These men are the secretaries of the various state medical associations, with the editors of the official medical journals representing those associations. The meeting is essentially a clearing house of ideas, and therein lies its importance, for ideas form the dynamic of activity.

At the meeting held last November, the editor of this journal represented Arizona and New Mexico. Many ideas were gathered and stored for future use. One of the most interesting discussions centered about the problems of the small county medical society. A majority of the county societies in our two states fall in this classification,—with fewer than twenty-five members. There is now being offered by this journal a plan whereby the smallest county society (we have one in Arizona with three members) can have regular and profitable meetings and keep itself on record. This journal will

send printed copies of case histories to any county society, sufficient to supply all their members. The members of that society can arrange to meet once a month, at luncheon, at some member's home, or at a centrally located office, or wherever they choose, briefly discuss these histories, endorse their diagnostic conclusions on the history sheet and mail them back to this journal. They will then go on record as having held a regular county society meeting, with some valuable clinical discussions.

For larger county societies whose members are perplexed by too many meetings, the suggestion was made that the county society combine its meetings with those of organized hospital staffs. This has been done occasionally, but in some places it is the regular procedure. Under such an arrangement, the county society meets at the hospital where the staff meeting is to be held; after disposal of the routine business of the county society, the program is turned over to the hospital staff which then conducts its regular staff meeting as required by its organization rules.

The American Medical Association, in providing for this meeting of the officers chiefly responsible for medical organization activities in the various states, performs for the general medical profession a service whose importance and far-reaching influence can hardly be over estimated.

RESOLUTION

Realizing the great and irreparable loss that has been sustained by the medical profession of the city of Tucson, the state of Arizona and the entire Southwest, through the death of Dr. Joel I. Butler, the Medical and Surgical Association of the Southwest have taken cognizance of this great loss, and desire to express through this committee, our appreciation of his wonderful ability and character, and hereby extend our sincere sympathy to his wife and family.

We recommend that a copy of this resolution be spread upon the minutes of this association and a copy be sent to his family.

W. K. WYLDER,
J. A. RAWLINGS,
C. A. THOMAS,
Committee.

Albuquerque, N. M.
November 9, 1928.

RESOLUTION

Through the sudden death of Dr. D. C. Dodds, the Medical and Surgical Association of the Southwest is aware of the great loss that it has sustained.

Dr. Dodds was a highly respected member of our Association. He was a man who stood for all that was highest and best in medicine and, through his death our profession has lost a man who was loved and respected by all who knew him. His loss will be keenly felt by the profession, not only in Albuquerque, but throughout the southwest and we wish to express our sincere sympathy to his wife and family.

We recommend that a copy of this expression be spread upon the minutes of this Association and also that a copy be sent to Mrs. Dodds.

W. K. WYLDER,
J. A. RAWLINGS,
C. A. THOMAS,
Committee.

Albuquerque, N. M.
November 9, 1928.

NEW OFFICERS IN EL PASO COUNTY MEDICAL SOCIETY

At the annual meeting of the El Paso County Medical Society, held on December 3rd, the following officers were elected for the year 1929:

Dr. W. R. Jamieson was elected president. He has been a practitioner in El Paso so long that the A. M. A. Directory simply states "licensed prior to 1907." He practices the specialty of urology.

As vice-president, Dr. E. W. Rheinheimer was selected. He located in El Paso in 1917, and has previously served the society as secretary.

Dr. W. E. Vandevere, a comparatively new member of the society, was elected secretary-treasurer. Dr. Vandevere practices the specialty of eye, ear, nose and throat.

Dr. S. D. Swope, a veteran practitioner, who grows younger each year, was elected on the board of censors. Dr. Swope has practiced in New Mexico, in old Mexico, as well as in Texas. He is a neuro-psychiatrist.

Of special interest to this office is the Associate Editor. Dr. Leslie M. Smith was chosen to fill this important office. In welcoming him, it is only fitting to give public expression to our appreciation of the fine service and loyal cooperation of Dr. Harry Leigh, who gives up this work on January first. El Paso County is fortunate in being able to find so many members who can, and will, undertake the important function of recording, in their official journal the medical activities of the society.

INVITATION

A cordial invitation is extended to the members of the medical profession of Arizona, New Mexico and Texas by the President, the Board of Regents and the Arizona State Executive Committee of the American College of Surgeons to attend the Arizona, New Mexico and Texas Sectional Meeting of the College at Phoenix, on Wednesday and Thursday, February 13 and 14 next. Distinguished leaders in madical science and hospital administration will be present, including Dr. Franklin H. Martin, of Chicago, President of the American College of Surgeons; Dr. Charles L. Scudder of Boston, Chairman, Fracture Committee of the American College of Surgeons; Dr. Burton J. Lee of New York, Clinical Professor of Surgery, Cornell University Medical College; Dr. Allen B. Kanavel of Chicago, Professor of Surgery, Northwestern University Medical School; Rev. C. B. Moulinier, S. J. of Chicago. Executive Director of the Catholic Hospital Association; Robert Jolly of Houston, Superintendent of the Baptist Hospital; Dr. Bowman C. Crowell of Chicago, Director of Clinical Research of the American College of Surgeons; Dr. Malcolm T. MacEachern of Chicago, Director of Hospital Activities of the American College of Surgeons.

This meeting will not only be of scientific value to every doctor in the district, but in addition will afford them an opportunity of becoming more familiar with the Hospital Standardization movement which has done so much for the practice of medicine and which should be furthered to the fullest extent. Mark your calendar now and be present.

For any further information, see program, or address,

E. PAYNE PALMER,
Secretary of Section.

AMERICAN COLLEGE of SURGEONS

Sectional Meeting for Arizona, New Mexico and Texas

FEBRUARY 13 AND 14

HEADQUARTERS—HOTEL WESTWARD HO

WEDNESDAY, FEBRUARY 13

Registration at headquarters at Hotel Westward Ho

8 to 10 a. m.

Good Samaritan Hospital and St. Joseph's Hospital.

Surgical Clinics by Fellows of the College.

10:30 a. m. to 12:30 p. m.

Woman's Club Auditorium

Clinic and Demonstration on Fractures, conducted, by CHARLES L. SCUDDER, M D., Boston; Chairman, Fracture Committee, American College of Surgeons.

Clinic on Surgical Infections, conducted by ALLEN B. KANAVEL, M. D., Chicago; Professor of Surgery, Northwestern University Medical School.

(Any doctor in the southwest may present cases for discussion at these clinics. Arrangements for these should be made with Dr. E. Payne Palmer, Secretary of the Section, Phoenix).

10 a. m. to 12:30 p. m.

Woman's Club (Upstairs Assembly Room)

Hospital Conference.

(For trustees and hospital executives).

Address—*"The Fundamental Principles Underlying Efficient Hospital Administration in Their Application to Various Type of Institutions."*—MALCOLM T. MACEACHERN, M. D., Chicago; Associate Director, American College of Surgeons and Director of Hospital Activities.

Open Forum—Discussion of Administrative Problems. Representatives will be accorded the privilege of presenting their administrative problems and any matters they wish to have discussed. In addition, questions in the Round Table Conference pamphlet will be taken up as far as time permits.

NOON INTERMISSION

2 to 4:30 p. m.

Woman's Club Auditorium

Hospital Conference. (For doctors, hospital executives and personnel). WINFRED WYLIE, M. D., Phoenix, Chairman, Arizona State Executive Committee, American College of Surgeons, presiding.

Address—*"The High Lights of the Hospital Standardization Program."* FRANKLIN H. MARTIN, M. D., Chicago; President, American College of Surgeons.

Address—*"How the Hospital Management Can Assist the Medical Staff in Improving the Care of Fractures."* CHARLES L. SCUDDER, M. D., Boston; Chairman, Fracture Committee, American College of Surgeons.

Address—*"How Your Hospital Can Contribute to Clinical Research."* BOWMAN C. CROWELL, M. D., Chicago; Associate Director, American College of Surgeons and Director of Clinical Research.

Open Forum—Professional Problems in Hospitals. Conducted by MALCOLM T. MACEACHERN, M. D., Chicago; assisted by REV. C. B. MOULINIER, S.J., Chicago; Executive Director, Catholic Hospital Association; and ROBERT JOLLY, Houston, Superintendent, Baptist Hospital.

TOPICS FOR DISCUSSION:

1. Right to Choose the Medical Staff.
2. Extending of Hospital Privileges.
3. Basic Requirements for Staff Membership.
4. Organization of the Medical Staff.
5. Single or Multiple Staff Membership.
6. Relations between the Medical Staff, Governing Body and Superintendent.
7. Cooperation Between Medical Staff and Governing Body and Superintendent.
8. Conduct of the Staff Conference.
9. Case Records.
10. Clinical Pathological Service.
11. Consultations.
12. Efficient Surgery.
13. Autopsies.
14. Clinico-Pathological Conferences.
15. Follow-Up and End Results.

An opportunity will be afforded for all present to submit their own professional problems, or any other matters they wish to have discussed. In addition, other topics in the Round Table Conference pamphlet will be discussed, if time permits.

4:30 to 5 p. m.

Woman's Club Auditorium

Annual Meeting: American College of Surgeons for Arizona, New Mexico and Texas.

Election of Officers.

8 to 10 p. m.

High School Auditorium

Community Health Meeting. (See final program for details.)

THURSDAY, FEBRUARY 14

8 to 10 a. m.

St. Josephs Hospital and Good Samaritan Hospital. **Clinics by Fellows of the College.**

10:30 a. m. to 1:00 p. m.
Woman's Club Auditorium

Clinic on Cancer, conducted by BURTON J. LEE, M. D., New York, Clinical Professor of Surgery, Cornell University Medical College.

Motion Picture Film on Cancer.

9:30 a. m. to 12 noon, St. Joseph's Hospital.
2 to 4:30 p. m., Good Samaritan Hospital.

Hospital Conference in Hospital Administration and Hospital Standardization. (For trustees, hospital executives and personnel. Conducted by MALCOLM T. MACEACHERN, M. D., Chicago; REV. C. B. MOULINIER, S. J. Chicago, and ROBERT JOLLY, Houston; assisted by the Superintendents and Staffs of the hospitals. Conferences will embrace the following subjects:

1. Organization and Functioning of the Governing Body or Board of Trustees.
2. Procedure in Admission of Patients.
3. Business Methods in Hospitals.
4. Maintaining an Efficient Nursing Service.
5. Efficient Management of the Food Service.
6. Maintaining Efficient Case Records.
7. Organization and Functioning of the Clinical Laboratory and X-ray Department.
8. Organization and Management of the Physical Therapy Department.
9. Handling Surgical Dressings and Supplies.
10. Role of the Social Worker in the Hospital.
11. Maintaining an Efficient Emergency Service.
12. Organization and Management of the Hospital Pharmacy.
13. Handling of Infectious Diseases in a General Hospital.
14. The Interne's Duties, Relations and Responsibilities.
15. Maintining Beauty in the Hospital.
16. Ways and Means of Effecting Economies in Hospital Operation.

2 to 5 p. m.
Woman's Club Auditorium

General Scientific Session

Paper—*"Cautery in the Treatment of Cancer."*
A. C. SCOTT, M. D., Temple, Texas.

Paper—*Cranial Injuries.*
W. BURTON THORNING, M. D., Houston, Tex.

Paper—*Thoracic Surgery.*
P. G. CORNISH, JR., M. D., Albuquerque New Mexico.

Paper—*Review of* 3473, *Fractures.*
JOHN E. BACON, M. D., Miami, Ariz.

Paper—*"Indications for Surgery and Irradiation in the Treatment of Cancer."*
BURTON J. LEE, M, D., New York.

7 p.m.—Hotel Westward Ho

Banquet for Fellows, Visiting Doctors and Ladies. Motion Pictures.

IMPORTANT INFORMATION

Arrangements for the Surgical Clinics at the two hospitals from 8 to 10 each day should be made through Dr. Joseph M. Greer, Security Building, Phoenix, who will have entire charge of the assignments for these clinics.

The cases to be presented for discussion at the clinics of Drs. Scudder, Kanavel and Lee, must be arranged for through Dr. E. Payne Palmer, Secretary, Goodrich Building, Phoenix. Histories must be condensed and presented in writing. No history should be more than 250 words.

Information desk will be found in the lobby of the Hotel Westward Ho, where all visting doctors should register. Detailed information about clinics and any changes in program can be secured there.

RAILROAD RATES

One and one-half fare rates on both roads into Phoenix can be secured, on the certificate plan, good from Feb. 12 to Feb. 17.

ENTERTAINMENT OF LADIES BY WIVES OF FELLOWS.

On Wednesday, the 13th, at 1:30 P. M. party will leave Hotel Westward Ho for a drive around Phoenix and into the surrounding country with a tea at Jokake, returning to Hotel Westward Ho at 5:30 P. M.

On Thursday, the 14th, at 1:00 P. M. luncheon at Phoenix Country Club, followed by a musical.

At 7:00 P. M. banquet at Hotel Westward Ho.

Ladies are invited to attend the Scientific Session and the Community Health Meeting.

GRANT COUNTY (N.M.) MEETING

The members of the staff of Veterans' Bureau Hospital, Fort Bayard, New Mexico, gave a special medical meeting and buffet luncheon on December 7, 1928, to which all the medical and dental men of the county were invited. The medical phase of this meeting was a symposium of diseases of the heart, with program arranged by Drs. A. G. Coumbe, Frank L. Biscoe. and W. J. Baker, as follows:

"Mitral Disease," by Dr. Frank L. Biscoe.

"Myocarditis," by Dr. Lee T. Ferrell.

"Electrocardiograph in Diagnosis of Heart Disease," by Dr. R. W. Browne.

"Roentgenology in Diagnosis of Heart Disease," by Dr. M. H. Goldman.

Following a general discussion by the guests, a buffet supper was served.

Dr. S. J. Mann presided at this very enjoyable meeting.

J. P. WOOD, Secretary.

THE CLIFTON MINERAL HOT SPRINGS, at Clifton, Ariz., announce the opening of their institution, with complete equipment for all types of medicated baths and hydrotherapeutic treatment. The institution is also equipped with a physiotherapy department, for the administration of physical and electrical therapy. The resort is under the directorship of Dr. K. Bygness, with Drs. Hal Rice, C. H. Laugharn and F. W. Butler on the consulting staff.

THE AMERICAN MEDICAL LIBERTY LEAGUE

"It was in 1910 that the speciously named "National League for Medical Freedom" began its intensive campaign against scientific medicine in general and the American Medical Association in particular. Engineered and inspired by nostrum exploiters and those opposed to pure food laws, aided and abetted by the followers of the various cults, the League for Medical Freedom blazed its rocket-like course across the medical firmament—and, in due time, the stick came down! Doubtless there was good money in it for some one while it lasted. Tens, if not hundreds of thousands of dollars, were expended in newspaper advertising alone. But its effort was abortive because it was fundamentally wrong-headed and the good sense of the American people penetrated the motives that were behind it.

It is some time since we have heard of the "National League for Medical Freedom"; today there is another organization less heavily financed, but still, doubtless, producing a living for those who engineer it. It is the "American Medical Liberty League," with headquarters in Chicago. This concern does little, if any, newspaper advertising. It does, however, get out a set of leaflets and pamphlets and those who are, for one reason or another, opposed to scientific medicine, purchase these leaflets and distribute them."

Since this self styled "Medical Liberty League" has already made an unsuccessful attack upon the health and liberties of the citizens of Arizona, and since they will probably try something else under the guise of "liberty" during the present legislative session, the following information regarding the organization and the sweet smelling fakirs who founded it will be of interest to those who desire to know the facts.

THE "TRUTH-TELLER"

Before dealing with the personnel of the founders of the League, which in itself is interesting, something should be said about the "League's" official organ, the Truth-Teller—ironical name! This somewhat lurid sheet is "published semi-monthly by the Truht-Teller Publishing Company at 38 N. Division St., Battle Creek, Mich." The Battle Creek telephone directory does not show any company of this name, but it does show the "Ensign Printing Co." at 38 N. Division St. The editor of the **Truth-Teller** is W. S. Ensign—of whom more later—who puts after his name the mystic abbreviation "Phys. et Pat. Ch." Its "Associate Editor" is Wilhelm Heinrich Schwartz, M. D.; its "Managing Editor" is D. W. Ensign and its "Traveling Representative" is Thomas D. Ensign; in short, it seems to be largely an Ensign publication. The **Truth-Teller** keeps no subscription books but, if you receive a copy of it regularly, "you can rest assured that the subscription price of same has been paid." The **Truth-Teller** was previously **The Peril** ("America's Weekly Journal. Devoted to Homeopathy and Humanity") which, in turn, was originally known as **America's Homeopathic News**, edited by Wilhelm Heinrich Schwartz, M.D., "Vice-President of the International Anti-Vivisection and Cruelty to Animals Congress," etc., etc.

But to get back to the American Medical Liberty League: In the "Strictly Personal and Confidential" letter previously referred to, the officers of the "League were given as follows:

President—Charles M. Higgins
Vice-President—Eli G. Jones
Secretary—Lora C. Little
Treasurer—D. W. Ensign
Director—J. H. Greer
Director—W. S. Ensign
Director—J. W. Griggs.

Charles M. Higgins, Brooklyn, New York: This gentleman was, if he is not still, the treasurer of the "Anti-Vaccination League of America," and a somewhat active member of the "National League for Medical Freedom." He is, or was, a member of the "Vivisection Investigation League," and the "New York Anti-Vivisection Society." He published a sixty-four page pamphlet ("with exhausitve index, 10c post paid" entitled "The Crime Against the School Child," which advised the public "how to legally defeat vaccination, the medical evil which now kills more children than smallpox." This was advertised in the **Truth-Teller.** In 1917 Higgins also issued a twenty-four page pamphlet entitled "Restore the Coroners, Check Dangerous Medical Domination, and Protect Public Life and Safety."

Eli C. Jones, Buffalo, New York: Dr. Jones was graduated fifty years ago (1872) by Dartmouth Medical School. He was for sometime "President" of the egregious "American Association of Progressive Medicine." A few years ago he was sending out circular letters to physicians offering to teach—for a consideration—his method of curing cancer. Dr. Jones claimed to cure 80 per cent of all cases of cancer that he treated. In his letters to Ohio physicians he gave the name of Dr. C. S. Carr of Columbus, Ohio, as a reference. Carr was Peruna's advertising expert and ran a little medical mail-order concern of his own as a side line. Carr also published a freakish publication known as the **Columbus Medical Journal** in which periodical Eli G. Jones told about his "cures" for cancer, and numeorus other things and in which the Ensign Remedies Company advertised and to which W. S. Ensign contributed. Of course Dr. Jones was a member of the "National League for Medical Freedom" when that institution was in existence. According to a character sketch published in the **Truth-Teller,** Dr. Jones "has at different times practiced Allopathic, Eclectic, Homeopathic, Physio-Medical and Biochemical medicine." We can easily believe it.

D. W. Ensign, Battle Creek, Mich: Mr. Ensign was "Business Manager" and is now "Managing Editor" of the **Truth-Teller.** Enough said.

J. H. Greer, Chicago: Dr. Greer was graduated in 1875 by the Bennett Medical College, then an eclectic institution. For many years he conducted the "Harvard Medical Institute" in Chicago and specialized in genito-urinary work. In 1910 the United States immigration officials on the Canadian border wrote for information regarding J. H. Greer, stating that a number of aliens had received Greer's advertisements and sought entry into the United States for the purpose of treatment. Some of these aliens sent to the immigration service letters which they had received from Greer, together with some of Greer's advertising matter. Greer, it seemed, issued a booklet entitled "A Peep at the Mysteries of Nature" whereby he drummed up trade. Greer also urged some of his prospective mail-order patients to purchase his book "A Physician in the House." As Greer put it:

"If you cannot come and see me, treat yourself. This you can do with the aid of my book 'A Physician in the House.' Get a copy of it, study it carefully, and apply it exactly and watch your pains and aches vanish like an ugly dream at dawn."

According to a prospectus of this book: "It opposes medical fads of all kinds, and makes uncompromising war on vaccination, and the use of antitoxin." Furthermore, it was said to contain "Valuable information for the married." Greer claimed that he did not guarantee cures "except in surgical cases, such as variococele, hydrocele, hernia, fistula, hemorrhoids, and stricture, etc."

W. S. Ensign, "Phys. et Pat. Ch." Battle Creek, Mich.: Mr. Ensign is Editor of the **Truth-Teller** and, with Mrs. Little, apparently an important factor in the American Medical Liberty League. Presidents, vice-presidents and treasurers seem to change, as do also some of the directors, but through all W. S. Ensign and Lora C. W. Little continue as "Editor" of the official organ and "Secretary" of the organization, respectively. W. S. Ensign for some years has been doing a mail-order business in Ensign Remedies. The Ensign Remedies, according to Ensign, are good for whatever ails you. Apparently, there are about one thousand of them and they are known by numbers. Ensign therapy is a comparatively simple study.

A booklet issued by the Ensign Remedies Company lists all "Diseases and Their Cure." These are arranged alphabetically from "Abdomen," "Abortion" and "Abscess" through "Ecchymosis," "Eclampsia," "Eczema" and "Iritis," "Irritability," "Itch" to "Worms," "Wrinkles" and "Writer's Cramp." It is all very easy. For Peritonitis, take "748A and B"; for Alcoholism, "Topers should use No. 17"; for Appendicitis, "Use No. 758 A and B for the acute attack"; for Diphtheria, "No. 675A and B is our specific treatment. . . . Do not use anti-toxin." Should you have Atrophy of the Optic Nerve, take "No. 521A and B"; for Cataract, "No. 504A and B" are indicated. Yellow Fever calls for "No. 1066A and B", and Angina Pectoris for "342F." Bright's Disease is cured with "854A and B," but be sure you have the figures right as "No. 857A and B" is for Floating Kidney. For Lockjaw try "No. 34" and for Locomotor Ataxia, "No. 260A and B." "No. 1019A and B" are for Housemaid's Knee.

But the Ensign Remedies are good for more than physical ailments; "In the absolute cure of diseases of the mind, nothing equals the Ensign Remedies." Are you troubled with "Bashfulness," take "No. 186A and B"; do you see "Animals or Reptiles" (presumably of the pre-Volstead era) try "No. 187A and B." For "Dulness and Stupidity, No. 189A and B"; for "Disappointment in Love, No. 192A and B." For mere "Laziness, Lack of Ambition, No. 196A and B"; should you have a "Desire for Light and Company take No. 197A."

A few years ago the state officials of Michigan sent for some of Ensign's various cures and analyzed them and published the results in the official bulletin; "Fakes and Frauds." Ensign's "Appendicitis Cure" was reported to show on analysis sugar 100 per cent; Ensign's "Pneumonia Cure" was another 100 per cent sugar product, while Ensign's "Hay Fever Cure" had the same composition. The Michigan authorities unkindly called attention to the fact that while these remedies sold at $1.00 each, their estimated cost was less than 1/10 of a cent. It is only fair to state, however, that since these analyses were made the price of sugar has gone up.

J. W. Griggs, Minneapolis, Minn.: Mr. Griggs, was, if he is not still, vice-president of the "Anti-Vaccination League of America."

Lora C. Little: Mrs. Little, who seems to have had much to do with the organization of the "League," apparently hailed from the Pacific coast, where she was a traveling lecturer whose business it was to create sentiment against vaccination. Mrs. Little contributes prolifically to the "League's" house-organ the **Truth-Teller.** In addition to being "Secretary" and "Official Organizer" of the "Central Health Committee of the State of Illinois." There was the usual proportion of names of chiropractors and osteopaths on the letterheads of the official stationery of the "committee." This "committee," too, solicited funds—"for the purpose of securing medical liberty in the new Illinois constitution"—and made a special plea that the persons circularized should help secure, for a delegate to the Constitutional Convention, the nomination and election of Frederick A. Freeark, a Chicago lawyer who would "stand to the last ditch for our principle." Mr. Freeark's name appeared later as one of the "directors" of the "American Medical Liberty League." He was not elected.

The "League" also has "State Vice-Presidents." In 1920 forty-five states were represented; in 1922 this list had dwindled to thirty-six. This doubtless is an index of the waning interest in the "League." It would consume too much space to take up the various individuals whose names appear as state vice-presidents and publish the details on file regarding these persons. However, it will not take much space to give a brief sketch as revealed by the Propaganda files of the State Vice-President of California, Dr. George Starr White.

George Starr White, M. D., F. S. Sc. (Lond.), Los Angeles, Calif.: White, who was the "Second Vice-President" of the Allied Medical Associations in 1918, was graduated in 1908 when he was forty-two years old, by the New York Homeopathic Medical College and Hospital. He seems to have been one of the areas of dulness being determined meanapy" and of Fitzgerald's "zonetherapy," etc., and in 1915 it was announced that he would give one week courses to physicians in "Spondylotherapy" at Chicago, Kansas City and Denver, respectively. In May, 1915, White was arrested in Chicago and fined $100 and costs for practicing medicine without a license. Dr. White's specialty seems to be picturesquely known as "Bio-Dynamo-Chromatic-Diagnosis." This is described by one of its enthusiastic adherents as "Diagnosis by Sympathetic Vagal-Reflex." To obtain the "Sympathetic Vagal-Reflex" it seems the patient must face east or west and have his bare abdomen percussed until a dull area is located. The patient is then faced north or south and again percussed. Then, it seems, different colored lights are thrown on the patient, the location of the areas of dulness being determined meanwhile. A combination of ruby and blue light "will cause a reflex in cases of gonorrhea," a "green light will cause a reflex in cases of liver or gallbladder trouble," while the color for carcinoma is orange red! During the height of the influenza epidemic White took a flier in nostrum exploitation, putting on the market "Valens Essential Oil Tablets," which were for "Gripping the Flu out of Influenza," and were also said greatly to benefit or cure incipient tuberculosis, hay-fever, asthma, and "catar" (White affects simplified spelling). The letters "F.S.Sc., Lond.," after Dr. White's name carry with them an air of erudition and mystery that is well worth what they cost. They mean "Fellow of the Incorporated Society of Science, Letters and Arts of London, Ltd." The "Fellowship" is held by not a few "patent medicine" exploiters in the United States. It costs one guinea!

Here, then, we have brief sketches of those individuals who were mainly instrumental in bringing into existence the "American Medical Liberty League." The facts brought out are sufficient to permit the physician and the intelligent layman properly to evaluate the activities of this organization, which professes to have for its main object the protection of the public. The "American Medical Liberty League," like its prototype, the "National League for Medical Freedom," will flare, sputter—and go out!—**(From The Journal A.M.A., July 29, 1922.)**

ST. JOSEPH'S HOSPITAL (Phoenix)

DECEMBER STAFF MEETING

The regular monthly meeting of the Staff of St. Joseph's Hospital was held in the lecture room of the Nurses' Home on Monday evening, December 10th. In the absence of the secretary, Dr. R. B. Raney served in this capacity, reading the minutes of the last meeting and the monthly analysis of hospital service for the month of November. There were twenty-four deaths and one autopsy. (The autopsy reports given at this meeting were on patients dying in October, with one dying early in December.)

The chairman announced that this being the annual meeting, the election of officers was in order, those to be elected being a chairman, a secretary and three members of the Advisory Committee. The hold-over members of the Advisory Committee (Drs. Brockway, Holmes and Greer) automatically become the Executive Committee for the ensuing year.

Dr. E. Payne Palmer was nominated to succeed himself as chairman of the staff, and unanimously elected.

Dr. Dudley Fournier was re-elected secretary of the staff.

After two ballots, Drs. Goodrich (surgeon), Schwartz (specialist) and Milloy (medicine) were selected as members of the Advisory Committee.

Dr. Frank J. Milloy then took charge of the staff program.

Dr. E. W. Phillips discussed the case of Mrs. B. S., who died on Dec. 3rd, from perforation of multiple tuberculous ulcers of the intestines. This case report, with comments by Dr. Phillips and Dr. Palmer, and autopsy report are printed elsewhere in an early issue of SOUTHWESTERN MEDICINE.

Dr. Howell Randolph then presented the records of four patients dying in the hospital, with their autopsy reports, which are given below.

The remaining case on the program was held over until the next staff meeting.

CASE REPORTS BY DR. HOWELL RANDOLPH

Case 1. L. H., male, age 29.

Chief complaint: cough expectoration pain in left chest. F. H. Negative for tuberculosis. P. H. Was well up to one year ago (1926).

Onset and Course. Had an attack of pneumonia in Utah, 1926, and has not been well since. He has continued to cough since that time and expectorated two ounces daily of thick pus, increasing at times to a cup full. First examined here in Jan., 1928, at which time found the left side of chest almost entirely involved, with few signs on the right. In June of this year, he had a spontaneous pneumothorax, after which was taken to county hospital, and from there to St. Joseph's. The left chest was found to be filled with fluid, and aspiration of 900 of 1000 c.c. of yellow green fluid on several occasions, replacing with air, gave only temporary relief. He died on Oct. 22, 1928.

Autopsy (Dr. Mills):—

Body of male, very much emaciated. Subcutaneous fat practically absent. Left lung completely collapsed; pleural cavity filled with large quantity (1½ quarts) of pus and air. Heart and mediastinum pushed to the right. Dense fibrous adhesions attach the lung to the lateral chest wall about the interlobar fissure. Right lower lobe emphysematous. Upper lobe shows extensive involvement with old fibrous and calcific lesions of tuberculosis. Middle lobe showed passive hyperemia. Only a few scattered dense nodules of tuberculous involvement. The pericardium was thickened. Pulmonary valves normal. No involvement of the intestinal tract. Kidneys, negative. Spleen, negative.

Anatomical Diagnosis: Pulmonary tuberculosis; empyema.

Case 2. O. S., age 70, white American.

Complaint: Shortness of breath, chills, fever, weakness.

Onset and Course. Just one week before admission, patient was walking along the street, when he suddenly became ill with chills and weakness. He went into the hotel, sat down for a time, but did not feel better. He was put to bed and was seen soon after by a physician, whose findings are not known. He became somewhat worse in the following two or three days, developed some shortness of breath, and pain in the right chest, aching in the joints, and continued more pronounced weakness.

At the time of admission, he was not having much pain, but was quite short of breath, and prostrated with weakness. Every move he made was evidently difficult for him. He was coughing occasionally, and raising a moderate amount of frothy chocolate colored sputum.

F. H. Irrelevant.

Past history not obtainable, but he stated that he had been well up to the onset of the present illness one week ago.

Physical Examination. Temp. 99.6, pulse 90; respirations 22. An elderly man in very evident distress. The face is rather pale, and the perspiration abundant. Tongue coated. Throat injected. The chest shows slight increase in respiratory rate. The breath sounds and percussion note are somewhat increased over the left side in front and back. On the right, there are marked changes. Percussion shows marked impairment over the middle and lower lobe areas in front and behind, with flatness over the base. Resonance over the upper lobe is slightly impaired. Breath sounds diminished over the lower part of the chest and practically absent over the base. Numerous moist rales heard wherever breath sounds elicited on right side. Heart sounds are distant, regular, not rapid. Abdomen somewhat distended.

Diagnosis. There is a fairly typical history for lobar pneumonia, which was taken to be the probable diagnosis, but certain of the physical signs, dullness to flatness with diminished breath sounds, lead to the conclusion that either there is an obstruction in the bronchial tree or fluid over the right lower part of chest.

Course. The temp. next morning was normal and up to 102.2 in the afternoon, and fluctuated between 99 and 101 for the next four days. The pulse became irregular and at times very rapid and weak. He was practically in a stupor on admission, and continued to lose strength. Physical signs in the chest remained practically the same. An attempt at aspiration was unsuccessful in withdrawing fluid.

Autopsy (Dr. Mills):—This body is well nourished and without loss of subcutaneous fat. There is evidence of needle puncture between sixth and seventh ribs in midaxillary line. The parietal and visceral pleura are adherent over anterior surface of right lung from fourth rib to diaphragm and laterally to the anterior axillary line forming a shallow encapsulated pocket containing about 75 to 100 c.c. of thick creamy pus. There is a pocket about four inches in diameter between interlobar pleura of upper and middle right lobes containing about 25 c.c. The right lung was very heavy, of a greyish color with an opalescent cast. It showed a complete massive consolidation. Cut surface dripped pus, containing very little air and it was scarcely blood stained. The left lung appeared normal and feels normal throughout. Heart showed hypertrophy of the left ventricle wall whereas the right

ventricle wall seemed somewhat thinner than normal. Valves normal except the mitral which showed marked thickening and hardening of cusps and the chordae tendinae. Mitral ring was bony, hard and on section was granular as calcification. The liver was enlarged and rather softened. Extensive areas of yellow parenchymatous change were present with only a small amount of relatively normal appearing liver remaining. Changes were apparently periarterial in distribution.

Spleen was brittle and fibrous. Slightly enlarged kidneys; right moderately enlarged, light yellow in color, prominent fetal lobulation. Left perinephritic abscess; enlarged kidney, moderate hydronephrosis with increase in fat in the kidney pelvis. Bladder dilated. Prostate small and fibrous. Intestines negative.

Case 3. Mrs. D. P., age 39. Family history and past history negative. Chief complaint: Cough, expectoration, loss of weight, shortness of breath, etc.

She was never really robust, but was fairly strong until the first baby was born about four years ago. Started to run down when she was pregnant a second time three years ago. Seemed to pick up after the baby was born, and gained eight pounds. Had "flu" when she was four months along with second baby and has been coughing ever since. About three months after this baby was born, (20 months ago) she had what was called "ptomain poisoning." She had pains in the abdomen and diarrhea for about four months. She lost weight and was short of breath. She noticed that when she leaned over, she had a splashing sound on the left side of her chest. She improved after this, but in April, 1928, she started to get what was called inflammatory rheumatism in the feet and knees, and later in the jaws. She had pains in the feet ever since then until very recently when they passed away. They were swollen but not red. Elbows both swollen and red. About that time she noticed that lumps came out on her arms and forearms, which were swollen, painful, red and indurated. These gradually went away after a period of about four months. These lumps would grow to the size of a quarter before becoming smaller again. The temperature was high but not taken. Her general condition has become gradually worse. When she lies on the right side, she raises a good deal of foul sputum, but when on the left she does not raise at all. Has had an increasing shortness of breath which is very distressing. She came from California to Yuma where she was for three weeks, before coming on to Phoenix.

Usual weight 120. Best weight 138 four years ago. Present weight about 70.

Physical Examination: Very emaciated woman. Very short of breath. The right lung shows decrease in resonance down to fourth and fifth ribs. Moderately coarse rales to third rib and fourth interspace. Left shows decreased mobility throughout. Hyperresonance over the upper half. Decrease in mobility over the entire left. Distant bronchial breathing of amphoric quality over the upper half. Bottle blowing sound, and positive coin sound over the upper half. No rales. Marked retraction of the lower four ribs on each inspiration. Few moist rales over this area on inspiration.

Heart very rapid. Systolic murmur over the apex, replacing the first sound. P2 much accentuated.

Diagnosis: From the history of acute pain in the abdomen, shortness of breath and, later, splashing of fluid over the left side, believe she must have had spontaneous collapse at that time. From physical examination feel must still have partial collapse, or else the lung be completely shelled out over the upper half.

Autopsy Report (Dr. Mills):—Emphysema of right lung with thickening of the pleura over apex; dense adhesions to the diaphragm. Moderate amount of hypostatic congestion of the lower lobe and one area of infarction. Chronic lesion of tuberculosis and a few areas of evident recent involvement. No cavities in this lobe. On left, pleural adhesions over entire lung with intense adhesions to the pericardium. Incision shows multiple large cavities containing pus, occupying the entire lung, the largest at the upper lobe and apparently representing the entire upper lobe. This had a thin fibrous wall. Heart is normal in size and negative throughout except for moderate dilatation of the mitral valve leaflets, representing the result of a previous endocarditis. Gastro-intestinal tract normal except for a post-cecal appendix. The liver shows moderate fatty degeneration. Gall bladder slightly enlarged and thin walled. Spleen negative and kidneys negative.

Cause of death: Chronic pulmonary tuberculosis.

Case 4. Miss F. W., age 26, school teacher. Complaint: Cough, expectoration, fever, positive sputum.

During the winter of 1923-24 was teaching school, working hard and became run down in condition. Caught cold during the following summer, and upon examination, the physician told her that she had a great deal of trouble in the left lung with positive sputum. Went to a sanatorium in Minnesota where she stayed for a little over a year. She came to Phoenix in August, 1926. First consulted Dr. Holmes in Dec., 1926. Examination at that time revealed a large cavity in the left upper, with numerous rales throughout the left side, and a few scattered rales in the region of the hilus on the right. She was started on pneumothorax, but adhesions at the upper part of the lung prevented the collapse of the cavity. She had been advised before coming to Arizona to have a thoracoplasty, and this was again urged in the spring of 1927, when it was found that pneumothorax was not going to be effective, but the patient did not wish to undertake it. She was put under a regime of postural rest, and shot bags, which were gradually increased until she got up to a weight of about 17 lbs. Under this regime there was some improvement, and the cavity seemed to be somewhat reduced in size, but she was subject to attacks of what she called bronchitis when she would lose ground. The general trend was improvement and gain of weight and strength. In the spring of 1928, however, she had an attack of acute tonsillitis, and following this she began to slide quite rapidly down hill. She began to cough and raise more, her temperature began to go up to 101 or 102 at times, and she lost weight. The condition of the left lung appeared to be considerably worse, and there was some increase in the signs on the right.

Finally she decided to have the thoracoplasty, although it was felt that she had waited all too long to hope for a good result. Physical examination on Oct. 12, 1928, showed a poorly developed and undernourished young woman. General examination negative except for the chest. Practically no mobility on left chest by palpation and auscultation. Heart is apparently displaced into the left chest. Examination of left side rather difficult. Decreased resonance to dullness extending from the top to the bottom. Breath sounds are diminished over the entire left. There are a few sibilant rales in front after cough. Posteriorly, whispered pectoriloquy with post-tussic suction from fifth to seventh vertebral spine. Rather dry rales.

Right lung decreased resonance at the apex. There are a good many dry rales scattered over the upper half in front after cough. Posteriorly

there is post-tussic element after cough at the base. This undoubtedly is carried over from the left as it apparently can be traced across the midline.

X-ray report on Oct. 8th; "Roentgenogram of this chest shows very little abnormal shadow on the right side, there being moderate amount of fine fibrous striation. Heart is retracted to the left with total density over the basal area. There is either pneumothorax, or very large cavity at the apex and below this some coalescing infiltration into the lung field."

On Oct. 12, operation was done under ethylene anethesia. A first stage left thoracoplasty, removing liberal sections of the 11th, 10th, 9th, 8th and 7th ribs. Closed in the usual manner, with cigarette drain. She was in pretty fair condition following the operation, and seemed to get along fairly well during the following week. Temperature ranged between normal and 101, pulse 100 to 130. Eight days later portions of the remaining ribs were removed and the patient left the operating table in fair condition. An hour or so later she was taken very weak, blood pressure 70/40. Four hours later the pulse was stronger, and blood pressure 100/70. She died two days afterward.

Autopsy (Dr. Mills):—Upper right lobe normal in appearance except for slight mottling and few nodular areas and thickening around the edges. On incision there is shown extensive infiltration. Patchy lesions of tuberculosis involve practically the entire lobe. Some emphysema. There are scattered palpable nodules in the lower lobe and some in the middle lobe which is emphysecatous.

Left lung densely adherent throughout. It shows large thin walled cavity occupying practically the entire left lobe. Large sized cavity in the lower lobe and fibrosis. This lung was completely collapsed except for the cavity in the lower lobe. Heart and mediastinum drawn into the left chest. heart showing no gross abnormality. Line of excision of ribs could be distinctly felt, apparently no bony union. Left posterior chest wall shows two extensive incisions extending from above the level of the spine of the scapula to the level of the twelfth dorsal vertebra. These were probably incisions for a thoracoplasty done seven and three days previous to death.

Cause of death is supposed to have been respiratory obstruction from blocked drainage of lung.

EL PASO COUNTY MEDICAL SOCIETY

The El Paso County Medical Society met Nov. 12, 1928. The paper was by Dr. C. D. Awe, on "Malta Fever, With Discussion of Five Cases." A summary of it follows:

The close laboratory similarity between the micrococcus melitensis, the cause of malta fever, and the bacillus of contagious abortion in cattle, was emphasized by Evans in 1918. The possibility of human infection with the latter organism has been pointed out by several investigators. We recently had under observation five cases of undulant fever contracted in Iowa. Blood cultures and agglutination tests were positive during the febrile period.

Clinically the chief features were prolonged fever of undulant character, profuse sweats, leukopenia, mononucleosis and an enlarged spleen. In three of the cases, several intramuscular injections of 5 to 10 c.c. of sterile milk produced a general reaction with increase in the polymorphonuclear counts and a subsequent decline in fever to normal. The source of infection in four of the cases was traced to drinking infected milk while in the fifth case the possibility of porcine infection was suggested.

DR. F. P. MILLER reported three cases of Malta fever from the Big Bend country that occurred in 1918. Three discharged soldiers secured a large number of Mexican goats and the three became infected after eating meat of a slaughtered goat. The cases were proven bacteriologically. Dr. Miller's case responded to an antogenous vaccine.

DR. SWOPE reported several cases seen south of Deming, N. M. Imported Malta Island goats had caused the infection to the native herds. Goat milk had been the source of most of the infections. Subsequently many cases were reported until the herders were cautioined against drinking the milk.

DR. RAWLINGS commended the essayist and brought to light the probability of an extensive infection in the United States. One herd of dairy cattle in Illinois became infected with the infectious abortus bacillus from a prize bull.

DR. DUNCAN reported many cases that had occurred in the region about Tyrone, N. M., and throughout the Burro mountain district. Some army officers, he stated, had been able to demonstrate by serology studies, that Malta fever had extended throughout the Big Bend country several years ago.

DR. TURNER mentioned the scarcity of Malta fever since pasteurizing milk had been adopted in this area. A check in a dairy herd had recently established the fact that a cow was infected with infectious abortion. Swine must be regarded as potential sources of infection.

DR. W. E. VANDEVERE reported a clinical case, as follows:

Baby American, girl, age five. This child had been sick for about a week with what her parents considered a bad cold. On the afternoon of October 27th the child's respiration became so obstructed that Dr. Bruner was called, who in turn called me. I found the child markedly cyanotic, semiconscious, and using all of the accessory muscles of respiration. We used the kitchen table as an operating table. After injecting a few drops of novocain subcutaneously I made an incision just above the suprasternal notch and entered the trachea. The child coughed out a few tenacious plugs of mucus and in two or three minutes was breathing normally, fully conscious and with cyanosis gone. Three days later I removed the tracheotomy tube and drew the edges of the wound together with adhesive. The child is now well and recovery was uneventful. This child was given an injection of diphtheria antitoxin when first seen by Dr. Bruner, which is the proper thing to do in these cases. We should never wait for the laboratory report before giving antitoxin. The diphtheria bacillus was not demonstrated in this case and the diagnosis is nondiphtheritic membranous laryngitis and tracheobronchitis. Many of these cases have been reported in the last two years. We have had quite a few in El Paso and Dr. Leigh made a summary of these cases in a report last year.

I think the greatest factor of success in these cases, as well as laryngeal diphtheria, is a tracheotomy done early before the heart has been worn out by the strain. Many times a doctor is not called until the patient has been fighting for air for many hours and often then the family hesitates to give consent because they dislike anything in the nature of an operation.

Most of the leading laryngologists of the country, including Lynch of New Orleans and Tucker of the Chevalier Jackson clinic, advocate doing a tracheotomy instead of intubation, the reasons given being:

1. There is usually less struggling and shock to the patient to do a tracheotomy than an intubation, and this is important in an overburdened and toxic heart.
2. The danger of the tube being coughed out or

being dislodged downward is eliminated when we do a tracheotomy.

3. In doing intubation there is the possibility of forcing membranes into the trachea ahead of the tube and causing still more embarrassment of respiration.

4. An intubation tube is likely to become clogged with plugs of mucus, whereas it is an easy matter for the nurse to remove and clean the inner tube of the tracheotomoy set as often as necessary.

5. An intubation tube may cause ulceration and stenosis of the larynx when introduced between highly inflamed vocal cords, necessitating prolonged and often unsatisfactory after treatment.

6. Often it is of the greatest help to be able to aspirate tenacious plugs of mucus through the tracheotomy wound by means of a soft rubber catheter or bronchoscope, in order to free the lower bronchi from obstruction. This would be a difficult or impossible procedure through the intubation tube.

The main argument against tracheotomy seems to be on account of the resultant scar. However, this is negligible if the wound edges are carefully approximated after the tube is removed, and in those cases where a slight scar is left it is an easy matter under local anesthesia to dissect out the scar and convert the longitudinal scar into a transverse one corresponding to the natural folds of the skin of the neck.

The main argument in favor of intubation is the fact that the patient has the nasal passage to heat and moisten the air drawn into the lung. In tracheotomy this can be taken care of by the use of a croup kettle to generate moisture and a tent made of sheets to confine the moisture.

November 19, 1928

CASE REPORT

DR. WERLEY reported the case of a man who was sent to Dr. Garrett from Marfa, Texas, by Dr. John Brown on account of profuse hematemesis. The hemorrhages had been very large and he was quite exsanguinated. Upon examination by x-ray it was discovered that he had a large aneurysm of the first portion of the descending aorta. He had never complained of pain or other symptoms in his chest; the Wassermann reaction was strongly positive.

Dr. Garrett turned the case over to Dr. Werley. Anti-syphilitic treatment was instituted. During the subsequent three or four weeks there were repeated profuse hemorrhages and the patient grew worse; the legs became very edematous and the abdomen was filled with fluid. He was then given novasurol intravenuosly, together with large doses of ammonium nitrate. On this treatment the ascites subsided and then it was noticed that the liver was enlarged, especially the left lobe. The spleen was also palpable.

At first it was suspected that the bleeding occurred from ulceration of the aneurysm into the esophagus. After finding the enlarged liver and spleen and taking into consideration the ascites, it was concluded that the hemorrhages were due to syphilis of the liver of cicatricial character. Novasurol has been continued and the patient is very much improved. The hemorrhages have stopped.

November 26th

DR. SWOPE reported a case of cerebellar tumor with autopsy findings and specimen. The outstanding symptoms had been a rapid onset of vomiting, ocular palsy, difficulty in walking, particularly at night, and a tendency to fall. A general flaccid paralysis with blindness and a choked disc determined the final progressive symptoms.

Autopsy confirmed the diagnosis. The tumor was a glioma and extensively involved the cerebellum with an extension to the mid-brain.

CAPT. PRATT presented three neurological cases.

Case 1. Tabes with Charcot joint. Distention of the knee was extreme. For a long time the diagnosis had hinged about a tuberculous knee or a suspected gonorrheal arthritis. Serology and x-ray cleared up the diagnosis.

Case 2. Tabes with a negative serology.

Case 3. Case of multiple sclerosis. Diagnosis arrived at largely by a process of elimination. Optic atrophy, deep nerve degeneration, and evidence of sclerosis of the cranial nerves, formed the basis of diagnosis. Tumor and syphilis had been eliminated by appropriate tests.

DR. GEO. TURNER gave a report with autopsy findings, of a fatal case of Ergotapiol poisoning, as follows:

Mrs. E. K., age 18; white; married seven months; was admitted to the Masonic Hospital October 27, 1928, with DR. E. M. BARNES in attendance.

Family History: Father and mother living and well; one brother and six sisters living and well.

Chief Complaint: Patient came to the hospital complaining of a burning in throat and mouth, which at first was thought to be tonsillitis. Had had severe hemorrhage from the bowel. About three weeks previous when Dr. Barnes first saw the girl she was very weak, and upon examination of the uterus found that she had had a miscarriage. She had taken two boxes of Ergotapiol, there being only one tablet remaining in the box, over a period of about two weeks. When the doctor saw her she was very weak and had a bloody discharge from the uterus. There was mucus and blood in the vomitus at that time. Her enteritis continued and in the afternoon she began to hemorrhage from the bowel. Her temperature all this time was subnormal; it went down as low as 95 degrees. She was conscious and would answer the doctor's questions very slowly. The hemorrhage from the bowel lessened and she seemed to improve for a few days but could not get her to take any water. There was no kidney function for 24 hours. Her urine examination was negative. Had to wash out her stomach and feed her through a stomach tube; occasionally one to two ounces of water was also given. About two days before she was sent to hospital she became very weak. Dr. Barnes gave her hemoplastic serum, her stools were very discolored and large clots of blood were present. Her hemoglobin was 20 per cent. A blood transfusion of 500 c.c. brought her hemoglobin up to 50 per cent, but her condition continued to grow worse and the day of her death she developed an acute mania and tetany of the voluntary muscles and apparently breathing just stopped.

AUTOPSY

Chest: There are no adhesions or excess fluid in either pleural space. The visceral pleura over the right lower lobe is of a chocolate brown color and the underlying lung tissue feels soft.

The pericardium is everywhere smooth and shining and the cavity contains no excess fluid.

Abdomen: The stomach is somewhat distended. The lower margin of the liver is slightly rounded. The spleen is about normal in size. There is no excess fluid in the cavity. The ovaries and tubes are normal. The uterus is slightly larger than normal. The jejunum and ileum show dark brown colored patches of discoloration corresponding to areas of ulceration or congestion of the mucous membrane. The mesenteric blood vessels show marked engorgement.

The stomach is somewhat enlarged and is filled with a bright yellow fluid. The mucosa is generally congested with patches of petechial hemorrhages. It is void of rugae. The mucous mem-

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brane of the duodenum shows marked congestion.

The jejunum and upper ileum show rather frequent areas of rather marked congestion and in places a sloughing of the mucous membrane. The terminal ileum is less marked in this respect. The mucous membrane of the colon shows marked congestion throughout.

The kidneys show a marked degree of congestion.

The spleen is about normal in size and somewhat soft.

The left lung is air containing throughout and shows no evidence of infection. The upper lobe of the right lung is air containing, while the lower lobe is completely solid. The cut surface of the lower lobe is very moist and of a chocolate brown color. A small amount of yellowish pus exudes from the small bronchi on pressure.

The heart is negative except for a moderate softness of the muscle tissue.

Anatomical Diagnosis:—

1. Enteritis, acute.
2. Lobar pneumonia, right lower lobe.

GOOD SAMARITAN HOSPITAL (Phoenix)
September (1928) Staff Meeting

(Continued from last month)

Case 3904 was discussed by DR. A. J. STROUD:

Boy of 19, well nourished. Had been sick for four days, first with headache, especially at back of neck; yesterday had a high fever. Physician was called at 9 a. m. today and patient had a temperature of 103.2, pulse 94; was slightly delirious. Eyes reacted well. Lungs negative to percussion and auscultation. Heart sounds somewhat weakened and heart muscles seemed embarrassed. Abdomen negative. Complained of terrific headaches especially at back of neck and could not sit up without violent pain in head. Patient was nervous, restless and skin was dry.

Throat showed no signs of infection. Neck was not stiff. Kernig not present. No diagnosis was made. Patient was seen again at 4:30 p. m.; temperature 104.4, pulse 106. Seemed more sick. Face purple and neck was not stiff. Lungs and heart again negative, except for heart embarrassment; delirious. Skin hot and dry and there seemed to be a very slight evidence of Kernig, which was not definite enough for diagnostic purposes. Ordered to hospital. Spinal puncture was made and fluid was clear and under normal pressure.

This case presented an interesting study in that recovery was well under way before the diagnosis could be made. The terminology "simple meningitis" is not used frequently, as it has so long been associated with tuberculous meningitis as to be confusing. Yet it is hard to distinguish between a leptomeningitis from a toxic condition due to some disease, as influenza, and an acute serous meningitis.

A toxic meningitis or meningism could have given the chain of symptoms here shown with quick recovery; had not the spinal fluid been drained and the recovery come so quickly this certainty would have been the diagnosis. However, as the alleviation of an acute serous meningitis is by spinal tap and this case began to improve after the second puncture it would lend itself to the terminology of an acute serous meningitis which is a newer terminology for a simple meningitis.

Early in the course of the disease there was a

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malaise with headache, especially at the occiput, and on the fourth day a quick rise in temperature to 103.2 with one attack of vomiting although some nausea was present much of the time; the temperature rising to 104, he was ordered to the hospital for observation. The faculties were cloudy and the peculiar blank expression and mutterings made a diagnosis of a sudden type of encephalitis not very remote. Against this was the very high temperature although the spinal cell count was within the proper limits, 57 and 120. Monos being in preponderance also made us aware of an encephalitic condition.

After the second spinal puncture the symptoms subsided rapidly. The picture however was that of great irritability even when the mind again became clear. There were three days of total delirium and the reflexes increased from a simple type of heightened irritation to almost convulsive movements to plantar irritation. Clonus was present on both sides and equal, with positive Oppenheim and Babinsky with however no increase of knee jerks or opisthatonos or even relative stiffness of the neck. A positive Kernig was made out and increased for three days. Photophobia was present at all times. The patient could be aroused to answer questions but does not remember the days or the questions asked.

A heat stroke should be thought of, but the temperature came on the third day of confinement and the fourth day after malaise developed. There was no "hot body" feel. The pupils reacted and the intense thirst was absent; neither was the face suffused or mottled. It may however be possible to have a late manifestation of a heat stroke which could cause a meningismus, with resulting chain of symptoms as above. No muscle cramps observed.

The real differentiation was first from cerebrospinal meningitis which was thrown out by a clear spinal fluid and other findings in the fluid. Then from an encephalitis lethargica which was too sudden in onset and the temperature was too high. One point was that the pulse remained around 80 the first day, which differentiated it from a heat stroke.

The spinal fluid showed increased sugar, a slight excess protein, cell count 110, 92 per cent monos., the urine was positive for acetone but otherwise negative. The leucocytes in the blood numbered 12,000. The Widal was negative. Patient ran a stormy course but had a gradual recovery and was discharged from the hospital after about eight days.

Dr. Howell Randolph said that he believed that most cases of influenza meningitis are usually fatal but that at times they do get well.

Dr. Jordan said that the fact that the spinal fluid was clear on the first puncture does not eliminate epidemic meningitis. He had seen one case in which the first spinal puncture was clear and no cells, the next one showed 2,100 cells of meningococci.

Dr. Berger said most cases of influenza meningitis are fatal; the recovery of the case tends to rule out influenza meningitis; he would rather consider the case as one of encephalitis and that he is apt to be ill again.

Dr. Brown said he was inclined to have the same

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view as Dr. Berger and the case was primarily one of encephalitis with a tendency toward meningitis; otherwise he could not explain all the symptoms.

Dr. Stroud said he would keep the case under observation and probably report it at a later date.

October, 1928, Staff Meeting

The Medical and Surgical Staff of the Good Samaritan Hospital met for the annual meeting, Monday evening, Oct. 22. Forty-three members of the staff were entertained by the hospital at dinner, and at 8 p. m. they convened for the business meeting. The minutes of the last council meeting were read. The superintendent of the hospital, Mrs. Sexson, made the following report:

"The year 1927-1928 has been by far the most successful year the Hospital has had—successful in many ways.

"During the first nine months we had an increase of 30 per cent in number of patients cared for over last year; an increase of 25 per cent in operations and of 102 per cent in emergency patients. During the month of September alone there was 50 per cent more patients than in September, 1927.

"Our school has grown so that it has been necessary to limit the number of students, until we have more patients. We have forty-three students and ten graduate nurses at the present time.

"Some much needed equipment has been purchased during the summer; the two most important items are a McKesson suction machine and a McKesson gas anesthesia machine.

"The entire inside of the building has been painted. We thank the doctors for their interest shown both in the hospital and school, and especially for the care they have given to members of the faculty and student nurses when ill. We greatly appreciate this service."

Autopsies: The Council reported that the physicians and surgeons should take more interest in securing autopsies.

Dr. Felch said that through the county health officer many autopsies can be obtained. Those cases which come to the hospital and are inside of a day or two, if referred to the county health officer, can be made Coroner's cases and autopsied. The autopsy can be performed by the hospital pathologist, the interne or whoever may be designated to do the autopsies. They can be done at the hospital. While many of those cases in the past have not been studied in detail, many of them have been studied by some doctor of the community. Dr. Mills said that for us to be recognized by the American Medical Association as eligible for receiving internes we must get a higher per cent of autopsies. The autopsies should be done at the hospital by the hospital pathologist and records should be carefully kept of each autopsy. Dr. Victor Randolph said that getting autopsies was a matter of having some one particularly interested who would promptly ask for these at the time of the death. The interne is usually in the best position to get consent for autopsies. Dr. Holmes inquired as to whether the consent for an autopsy should be in writing. Dr. Randolph answered by saying that the undertakers had blanks for this purpose.

Mr. Sexson, business manager of the hospital, gave a discussion of the financial problems of the hospital. He said that in this hospital about 8 to 10 per cent of the cases were charged off as charity cases and about 90 per cent of the balance was collected. The per diem, per patient, cost is a little less than $5.00. He asked the doctors to send the patients or their relatives to the hospital be-

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fore the patient entered the hospital, to make the financial arrangements. The doctors should not make financial arrangements with a patient for the hospital.

Dr. Felch moved that Dr. Pearson be accepted as a member of the Staff. Seconded and carried.

Mrs. Sexson requested that the Staff give an expression as to the showing of records of a former physician in a case to the present physician. After much discussion, on suggestion of the secretary, the questoin was referred to the council to bring back recommendations at the next meeting.

Election of Officers:—The president called for nominations for president. Dr. Bloomhardt nominated Dr. Thayer. On motion of Dr. Thomas and numerous seconds the secretary was instructed to cast the unanimous ballot of the society for Dr. Thayer. The secretary put the question which carried with no dissenting votes. Dr. Brown was re-elected secretary on nomination of Dr. Felch.

Report of Records Committee by Dr. S. I. Bloomhardt, chairman:

In the month of September there were six deaths.

Case 3961.—Endocarditis. Brought into hospital in delirious state, labored breathing, irregular heart, marked regurgitation, poor pulse, swollen and edematous limbs. Died the day following admission. Very little could be gathered as to past medical history, which was unfortunate.

Comment: There has been some interesting work on rheumatic heart disease for some years past in New York, and recently published. Observations made in the follow-up clinic of the Presbyterian Hospital on patients who have been in the ward with acute attacks of rheumatic infection have an important bearing. It was found that more than one-fourth of the rheumatic fever cases and a slightly lower percentage of choreas, presented clinical evidence of progressing lesions of the heart. One of these patients showed none of the characteristic physical signs until after a lapse of five years and eight months; another six and one-half years, and another five and one-half years. It would seem that rheumatism may not only be active and chronic, but silent and progressive over a very considerable period. In making analysis of 393 cases of rheumatic fever, the evidence of demonstrable cardiac involvement during the first acute attack soars from 61 per cent in the group under 5 years to a maximum of 78 per cent in the 5 to 10 year group. He suggests and advises prolonged observation of these cases and begs us to use sanatorium treatment much the same as for the tuberculosis in the worst cases. Lawrence has recently presented the results of his studies in the Children's Clinic in St. Luke's Hospital, New York, during the past twelve years. He thinks rheumatic fever is, by all means, the chief if not the sole, important cause of acquired cardiac disease in children. The great majority of such children have few or no symptoms. He thinks the temperature as an indication for the institution of exertion has been found to be trustworthy.

Case 3775. Cerebral Hemorrhage. Excellent history and a very good physical done by the resident doctor. Patient aged 77, blood pressure record, glad to state, was kept up daily making the history of so much more value. A suggestion to the laboratory technician would be to date the report sheets or to the nurse if it is the nurse's duty to copy the laboratory reports.

Case 3838. Intracranial. Patient was brought into hospital unconcsious as a result of head injuries received in an automobile accident. Shortly after admission, he was seized with convulsions of a clonic nature involving the left side of body and

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the right side of his face. There is a good history and physical taken by the resident; nothing, however, is stated as to whether the patient was in severe, moderate or no shock. He was operated and a subtemporal decompression was done. He died shortly following.

Comment. The tendency in the treatment of cranial trauma is toward conservatism. In the clinics having a large experience with such cases, few operations are being performed and greater consideration is given operative indications before resorting to surgery. The two conditions encountered which the surgeon can influence are infection and intracranial pressure. Infection may be prevented by immediate debridement and suture of compounded skull fractures as is the custom in such injuries of upper bones. Intracranial pressure can be reduced by hypertonic solutions introduced in the alimentary canal or blood stream, by direct drainage of the sub-arachnoid space, by lumbar puncture or by subtemporal decompression. The increased density of population and speed of modern transportation is the largest single factor in the production of cranial trauma v.s. the automobile. In 189 out of 512 cases studied by Vance, this was the causative agent. The figures of McClure and Crawford list 239 automobile injuries in a series of 441 cases of head injury. Another interesting and not to be wondered at feature is that of 139 of Vance's cases of concussion, alcohol was found in 28.6 per cent. This is important for two reasons; first, it accounts, in a great measure, for the accident, and second, for the mortality. As we all know, alcohol so depresses the nervous centers that a lesser degree of trauma is necessary to cause death. In Vance's series of 507 cases, the brain was unharmed only 42 times; the majority of these did not produce any untoward effects. Grant, in commentary on this review states: "The crux of the situation from the point of view of operative relief revolves about how much laceration and damage to brain tissue took place in the hemorrhage cases. Cortical lacerations cannot be repaired surgically. A clot can be removed but the question always arises as to how many of the resulting symptoms are caused by the extravasation of blood and how many by the contusion and subsequent brain edema. In all probability a subdural clot reaches its maximum size and produces the effects attributable to it very soon after the injury occurs. Brain edema and swelling with further increase in intracranial pressure follow more slowly. Should we institute operative measures at once to remove the clot overlying a contusion or laceration when the symptoms are probably due more to actual cortical injury which cannot be repaired than to the clot, and when the trauma due to the operation itself may increase the brain injury, add to the general edema and further embarrass the patient? Or should we attempt simply to check and control a rising intracranial pressure by hypertonic solutions or lumbar puncture and only operate and try to drain the subarachnoid space as a last resort when these other methods of reducing tension have failed?" It is Grant's personal experience that the laceration is usually a much more serious factor than the clot; that the clots exposed at operation or revealed at autopsy have been thin and diffuse and that the injury to the brain surface and the resulting edema have been the most serious complications. Hence, Grant holds to the conservative measures in the treatment and does not operate except as a last resort to relieve pressure.

Carter restates the old dictum that cranial injury cases may be divided in three classes; (1) those with mild injury who will recover without treatment; (2) those so severely injured that they die

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no matter what is done; (3) those in which the outcome is problematical and the life of the patient depends on the surgeon's judgment and skill. Sechs, McClure, Crawford, Carter, Vance agree in general outline of treatment; (1) under no condition should patient be operated upon when shock exists; (2) conditions to be operated upon at once are (a) compound fractures may be debrided, (b) depressed fractures, (c) middle meningeal hemorrhage—rare lesion in spite of much talk of it. In past 8 years, in service of Dr. Frazier, eleven cases in series of 700 patients with varying degree of head injury had hemorrhage from middle meningeal artery.

Increasing intracranial tension may be lowered by hypertonic solutions by vein or alimentary canal, by lumbar puncture or by increasing the size of the cranial cavity and direct drainage of the cerebrospinal fluid by decompression. Operation is reserved as a last resort and only to be used when the pressure cannot be controlled by other means.

Case 3894. Adeno-Carcinoma in the body of the uterus. Admitted for intermenstrual bleeding. Nothing is said in the history about pain. She has not been nauseated and does not feel she is pregnant and had menstruated monthly with some spotting between menstrual periods. Physical examination was negative, made by resident doctor. Vaginal examination was negative, made by the resident doctor. No notations were made by the doctor in charge of the case. She was operated with preoperative diagnosis of ectopic pregnancy. On opening of the abdomen the uterus was found slightly enlarged and it was decided to do a hysterectomy in spite of the suspicion of pregnancy raised by the appearance of the uterus. General condition at close of operation was good according to the report, and four days later transfusion was attempted. The third day, her temperature shot up to 104; she became very toxic, commenced vomiting in spite of all treatment and transfusion. She died in two days. The reason for or cause of death, I do not know. The pathologist's report is one of papillary adeno-carcinoma.

Comment:—Dr. Watkins gave us a very enlightening and instructive talk, broadminded, too, on radiotherapy at last staff meeting. And after his talk, I was more than ever convinced that the effective treatment of carcinoma requires the cooperation of a group of physicians in the various specialties and particularly those interested in cancer. The case should be definitely studied and a definite plan of treatment should be decided upon before any form of therapy is begun. The clinical and experimental studies of Blair Bell and his associates at the University of Liverpool of the effect of various lead compounds upon malignant growths have been followed with widespread interest by surgeons in every part of the world. One must admire the carefully planned organization of this group of workers, their determination to attack the problem from every possible angle and their attitude toward the results so far obtained. With reference to the action of lead upon malignant tissue, Wood states that sublethal injection of lead into white rats with cancer causes congestion, edema and necrosis of the tumor, chiefly because of thrombosis of the blood vessels and only secondarily because of the toxic action of lead on tumor cells. He believes that thrombosis takes place only in tumor. It is a new work and the time is too short to say yes or no. Possibly the combination of lead and radium therapy may be the outcome.

Case 3506. Pernicious Anemia. Very complete history and physical examination. Diagnosis is rather vague. It might be enther pernicious anemia or secondary anemia. He was only in the hospital for a few hours or it might otherwise have been

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a very interesting study; but it could not be completed.

Comment: The absence of hydrochloric acid is one of the few constant features of pernicious anemia. There are a group of students who believe that hemolysis is due to bacterial infections of the intestines—the infection being secondary to loss of protection normally provided by the acid of gastric juice. This is interesting but cannot be definitely proved. Knott was able to demonstrate the presence in the intestine of hemolytic strains of bacteria, but he is careful to point out that the infection was not necessarily from sources above the pylorus and that in many cases, the bacterial strains were predominated by the fecal type. Concerning the treatment, you all have been reading about and, I am sure, feeding liver in large quantities. The interest was first attracted when Robschist, Robbins and Whipple told us of their excellent results experimentally and even more so when Minot and Murphy of Boston published their first paper on diet in pernicious anemia. The essential part of the prcoedure is the inclusion in the daily diet of 120 to 240 grains of cooked liver. The results of 125 cases treated by them over a period of three months to three and a half years were reported before the section on medicine at Edinburgh during the last year. The health of all has been distinctly improved. Minot and Murphy state the liver was used because they thought it might stimulate the maturation of the megaloblasts that crowd the bone marrow in relapse. They showed that, after feeding with large amounts of liver, there occurs a prompt temporary increase of the young erythrocytes (reticulocytes). Eighteen per cent of this group have taken the diet for two years or longer, three for three years. The average count was 4,650,000. It has been pointed out that drainage to the bone marrow from multiple transfusions may be an unsatisfactory response to liver feeding.

Case 3909. Automobile Accident. Diagnosis, concussion of the brain, fractured pelvis, fractured right ftmur, shock. Patient died of shock five or six hours after admission.

CASE OF PELLAGRA

DR. C. B. PALMER demonstrated a case of pellagra: patient is a female 55 years of age, history is as follows: Patient has been feeling weak and tired for several months. She has had attacks of what she terms indigestion. Bowels are never regular, she states that she is either constipated or having diarrhea. Previous to entrance the patient has been having diarrhea. She has been unable to take heavy foods and her diet for some time has consisted chiefly of bread and canned vegetables. She has eaten practically no meats, very little milk and the diet seems to have varied very little from that of canned vegetables and bread. She has been losing in weight but does not know how much. Appetite only fair. About a month before admission she began having sores in her mouth. About two weeks later noticed what seemed to be "blisters" on her feet; these areas later became somewhat scaly. This has developed on the feet, legs and arms especially. Patient at time of entrance complained of no severe pain, only a feeling of general weakness. Past history: She has always been fairly well. No history of any operations, injuries or serious illnesses. She is the mother of four children, all living and well; husband in good health. The urine shows a trace of albumin, many pus cells, and acetone. The blood has 8,900 leuc. 22 per cent lymphocytes, and 98 per cent polys. Her temperature runs to about 99 at some time during the day. She is now on a heavy protein diet and is apparently improving.

Case 4088 by Dr. C. B. Palmer

About one month ago this girl had considerable dysmenorrhea and aside from that no history of any illness until Wednesday prior to admission to hospital, when she had been playing basketball. On coming home she vomited but told her parents of no injury but has had pain and today had considerable pain in right lower quadrant of abdomen. This pain became progressively worse and finally located itself in lower left abdomen. Patient came to my office Saturday afternoon complaining of this severe pain in left side. She was sent to the hospital. Patient's first menstrual period appeared in May of this year. She has been flowing regularly since then. Flow was profuse, period lasting only about three days. She gives no history of former illness and no history of any former attack of abdominal pains. She states that when playing basketball on Wednesday previous to entrance to hospital, she was hit in the abdomen with a ball. She suffered much pain and it was necessary for her to lie down for some time following accident. She has had more or less constant pain in lower abdomen since that time, especially on the left. Patient is the oldest of several children in the family; all others are apparently well.

Physical Examination: Anxious expression of face; eyes, ears, nose and throat negative. No enlargement of glands of neck. No findings in lungs; heart normal except rapid, pulse 120. Abdomen, rigid, lower segment enlarged and very tense, and excrutiatingly painful; enlargement appeared symmetrical. G. U. negative. Skin clear. Bones and joints normal. No vaginal examination was made but rectal examination showed posterior cul-de-sac and left side of pelvis distended by rather rigid mass. The urine was positive for acetone and diacetic acid and had an occasional blood cell. The white count was 30,000. 86 per cent polys.

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At operation left tube and ovary with large cyst with hematoma were removed. All was adherent to bowels and omentum. The appendix was embedded in an omental mass. Appendectomy was done. The pathologist's report is as follows: (a) Appendix; sections show chronic organized exudate on the surface and marked fibrosis of the walls,—Chronic Appendicitis. (b) Large ovarian cystic tumor, containing soft friable tissue apparently a papillary type of growth and a large amount of clotted blood. Sections of the wall show fibro-vascular structure with a moderate amount of inflammatory infiltration. The cyst cavity is lined with masses of atypical epithelial cells without definite arrangement. Small particles of tissue lying in the cyst contents show similar epithelium like cells resting on a papillary type of stroma and contents are made up of partly organized blood clot and detached masses of these deeply staining cells. We are of the opinion that this is a papillary adeno-carcinoma.

The patient made an uneventful recovery, so far as immediate results are concerned.

DR. GOODRICH said that the pathologist's discussion is the important and interesting part. Such tumors are found in all ages. The authorities differ as to the etiology and the tissues which are responsible for the growth. These tumors were first described about 100 years ago and were referred to as warts of the ovaries. Authorities recommend that all tumors of the ovaries should be removed together with the membrane so that no part of them is spilled in the abdominal cavity. As to diagnosis, Williams reviewing the literature came to the conclusion that the origin was the general layer of the ovary. Certain authorities hold there are two types of cells, one producing cystic tumors and the other adenomata. Metastases are prone to occur if the contents of the tumor is spilled into the abdomen. The tumors may be bilateral. As a rule the patients with these tumors have menstrual disorders. The diagnosis should rest upon a bimanual examination. Dr. Fattebert asked if metastasis is through the blood vessel or from a spilling of the contents into the abdomen. Dr. Goodrich replied that pressure upon the tumor probably caused direct metastasis to surrounding tissues. The treatment of the tumor is surgical and the same as for any early cancer. X-ray treatment has been tried but without success. One case was reported in which radium was inserted into the uterus. He said he expects that this case will probably have metastases within a year.

DR. JORDAN said he has seen one case in an eastern hospital this summer. Many of these cases are highly malignant and tend to have metastases.

DR. WATKINS said that one case similar to this had been treated in this hospital. The original tumor had been removed. She had high voltage radiation. Subsequent tumors were removed and she was submitted to radiation but without apparent improvement. He reported another case who had been operated and who had high voltage treatment and she has lived for years in good health.

The authorities agree that all these cases should have prophylactic radiation.

DR. MILLS said that metastases in these cases came as a rule by direct implantation of parts of the tumor or extension of the tumor to adjacent tissues. He reported a case with nodule of the vagina which had the appearance of the original tumor.

Dr. Palmer said the prognosis in this case is extremely bad. In subsequent cases he would be more on the lookout for a malignant growth and would handle it still more carefully. The hemorrhage in this case enlarged the tumor. He said the fear of getting into a pregnant uterus was a deterrent from doing the proper surgery. The tumors should not have been opened until after removal of the tumor from the abdomen. He plans to give the patient radiation. A serious feature of the case is what to tell the patient and her family. He expects to tell the family the dangers.

DR. GOODRICH says Williams advises to enlarge the incision so as to remove the tumor intact and not to incise the tumor to reduce its size and particular care must be taken to spill no part of the tumor or its contents.

The hour of ten having arrived, the meeting adjourned and the other cases will be presented at the next meeting.

ORVILLE HARRY BROWN, Sec'y.

PERSONAL NEWS ITEMS FROM EL PASO, TEXAS

DR. EDGAR L. GILCREEST, of the Medical Department of the University of California delivered a lecture on the "Life and Work of William Osler" before the members of the El Paso County Medical Society and the Ladies' Auxiliary on the evening of December 28, 1928. Dr. Gilcreest was a student at Johns Hopkins, later served with a Red Cross unit in the Balkan Wars, and during the World War was with a Red Cross unit stationed at Oxford University. It was during this later period, when he was in close association with Osler, that he made notes and gathered material for this lecture.

DR. S. D. SWOPE has returned from Havana, Cuba, where he attended a meeting of the Pan-American Medical Association, December 29 to January 3. He delivered an address there on "The Growing Importance of Industrial Medicine in the Western Hemisphere." Dr. Swope reports a good meeting, with about three hundred physicians in attendance

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from all parts of the Western Hemisphere. The papers were of a high character. Dr. Lewellys F. Barker of Baltimore delivered an "Oration on Medicine," and Dr. Wm. J. Mayo of Rochester an "Oration on Surgery." Other scientific papers were presented by representatives from various North and South American countries, some of them being in Spanish.

DR. FELIX P. MILLER leaves January 10 to attend a meeting of the scientific council of the Texas State Medical Association of which he is president. The council meets at Temple, Texas.

DR. A. W. MULTHAUF has returned from a brief visit to Johns Hopkins Hospital at Baltimore.

DR. STEPHEN A. SCHUSTER recently spent six weeks visiting the clinics on brain surgery at the Mayo Clinic, Rochester, Minn.

PERSONALS AND NEWS

DR. JOSEPH M. GREER, after extensive postgraduate work at New York and other eastern medical centers, extending over nearly a year, has returned to Phoenix and opened offices in the Security Building. His work will be confined to general and orthopedic surgery.

DR. IRVING F. GRAM, formerly of Buffalo, N.Y., has opened offices in the Security Building in Phoenix, in the practice of eye, ear, nose and throat diseases. Dr. Gram is a graduate of the Hahnemann Medical College of Philadelphia, in 1917.

DR. L. C. WITHERSPOON, formerly of El Paso, now with the United Fruit Company in New Orleans, spent the Christmas holidays with friends in El Paso.

DR. F. H. JOHNSON, of Carrizozo, N. M., has been appointed health officer of Lincoln County in that state, succeeding DR. P. M. SHAVER, who resigned after several years of very faithful service in the office.

DR. T. B. LYON, of Raton, N. M., has been appointed health officer of Colfax County in that state, following the resignation of DR. H. W. HEYMANN.

DR. W. T. BROWN, of Valmora, N. M., superintendent of the Valmora Sanatorium, was the director of a very unusual banquet and entertainment, at the Stevens Hotel in Chicago, the latter part of December. The dinner was sponsored by the forty-four industrial concerns in Chicago who built and equipped this sanatorium for their tuberculous employees. More than 600 of the leading physicians of Chicago attended the dinner. In order to create the proper atmosphere, more than 500 pieces of New Mexican pottery were brought to Chicago, together with apples, turkeys and wild honey also from that state. Princess Tsianina, one of the famous singers of western songs, was an entertainer; Mrs. Gladys Adamson of Raton, N. M., also a famous singer of cowboy songs, sang several pieces; Señor Henri Fountain, with his three sisters, sang Spanish and western songs. The Valmora Sanatorium was founded 18 years ago, by 35 Chicago industrial concerns, as a place where their employees could go for treatment for tuberculosis, at moderate cost.

PHYSICIANS OF BISBEE, ARIZ., according to a city license recently adopted, will be required to pay a quarterly fee of $5.00, to practice medicine in that city. They are included along with all other professions and business concerns in a new license schedule.

THE NEW MEXICO STATE BUREAU OF HEALTH is asking for an increased appropriation from the state, to offset the withdrawal of aid formerly given by the Rockefeller Foundation and the Sheppard-Towner organization. The Bureau's expenses last year were $49,500, including the extra funds required to combat the poliomyelitis epidemic and the outbreak of malaria in the Rio Grande valley. This year, they ask for an appropriation of $44,200. Dr. Luckett is also asking the U. S. Public Health Service to send a man to take the place of Dr. D. B. Williams, director of the Division of County Health Work, who is leaving the Bureau because of the withdrawal of the Rockefeller aid.

DR. F. W. FORGE, county health officer of Chaves County, N. M., has been forced to resign because of lack of funds. Dr. Forge entered on this work last June, following some very admirable newspaper comment on the necessity for full-time trained service in this position. His efforts have given general satisfaction and there is general regret that the county cannot find the funds to continue this full-time service.

THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF SOUTHERN CALIFORNIA is the recipient of a gift of $100,000 to their endowment fund from DR. and MRS. W. W. BECKETT of Los Angeles. Dr. Beckett is one of the pioneer practitioners of Southern California, is medical director of the Pacific Mutual Life Insurance Company, and, in making this gift, expressed the desire to aid in providing adequate medical training in southern California.

This school has recently made two appointments to the faculty. DR. PAUL S. McKIBBEN, professor of anatomy at the University of Michigan, has been called to the chair of anatomy. DR. HARRY J. DEUEL, professor of physiology at the University of Maryland, has been appointed to the professorship in biochemistry.

SITUATIONS WANTED

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